Robert A. Mittelstaedt (State Bar No. 60359)
ramittelstaedt@jonesday.com
Craig A. Waldman (State Bar No. 229943)
cwaldman@jonesday.com
David C. Kiernan (State Bar No. 215335)
dkiernan@jonesday.com
Lin W. Kahn (State Bar No. 261387)
linkahn@jonesday.com
JONES DAY
555 California Street, 26th Floor
San Francisco, CA 94104
Telephone: (415) 626-3939
Facsimile: (415) 875-5700

Attorneys for Defendant
Adobe Systems Inc.

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA, SAN JOSE DIVISION

IN RE: HIGH-TECH EMPLOYEE ANTITRUST LITIGATION

THIS DOCUMENT RELATES TO:

ALL ACTIONS

Master Docket No. 11-CV-2509-LHK

EXHIBIT 2 TO DECLARATION OF CHRISTINA BROWN IN SUPPORT OF DEFENDANTS' OPPOSITION TO PLAINTIFFS' SUPPLEMENTAL MOTION FOR CLASS CERTIFICATION

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA, SAN JOSE DIVISION

IN RE: HIGH-TECH EMPLOYEE)

ANTITRUST LITIGATION) No. 11-CV-2509-LHK

-HIGHLY CONFIDENTIAL-

VIDEOTAPED DEPOSITION OF EDWARD LEAMER

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recovery in the labor market. And that has to do with both jobs and with compensation. So I've done countless empirical exercises having to do with that issue as well. 09:06:12 09:06:14 09:06:17 09:06:21

Q. Have you ever done a regression analysis with respect to correlation of job titles and compensation? 09:06:23 09:06:25 09:06:36

A. Correlation of job titles. You mean correlation of compensation by job title, I suppose? 09:06:39 09:06:43

Q. Right. 09:06:46

A. Not to my recollection. 09:06:48

Q. Are you working with any labor economist on this project? 09:06:52 09:06:55

A. No, I am not. 09:06:59

Q. Who are you working with? 09:07:01

A. I'm working with a group of economists at EconOne, which is an economics consulting firm. 09:07:04 09:07:07

Q. And what is your relationship with that firm? 09:07:13 09:07:14

A. What do you mean by relationship, please? 09:07:15

Q. Have you ever heard that word before? 09:07:20

A. I've heard the word before, but the word relationship can be interpreted in many possible ways. I want the record to be as clear as possible, so if you can be clear about what kind of a 09:07:22 09:07:24 09:07:26 09:07:28

relationship you have in mind. 09:07:30

Q. What kind of relationships do you have with EconOne? 09:07:31 09:07:37

A. I work with several of the individuals whose job it is to manage the large data sets that are the foundation for my data analysis. I provide them with advice as to what kind of statistical analysis I would like to have done. They provide me with the data set, so I can do my own independent statistical analysis. It's pretty hard for me to identify every feature of that relationship. 09:07:43 09:07:46 09:07:51 09:07:54 09:07:59 09:08:02 09:08:05 09:08:08

Q. Do you have any financial interest? 09:08:12

A. No, I -- no, I do not. 09:08:14

Q. Now, do you agree that in designing an econometric study it's important for the designer to have the context in mind? 09:08:17 09:08:21 09:08:24

MR. GLACKIN: Object to the form. 09:08:26

THE WITNESS: I do very much agree the context matters for most inferences with nonexperimental data. 09:08:29 09:08:30 09:08:34

BY MR. MITTELSTAEDT: 09:08:36

Q. And you agree that the data you're using here are nonexperimental? 09:08:36 09:08:38

A. I do agree with that. 09:08:42

Q. Is it your theory that -- let's take one of 09:08:45

my clients, Adobe -- that any time Adobe would give 09:08:49
a raise to one or more individuals, it would 09:08:53
necessarily give a raise to all or nearly all of its 09:08:57
employees? 09:09:05

MR. GLACKIN: Object to the form. 09:09:06

THE WITNESS: I have never stated that 09:09:07
opinion. 09:09:08

BY MR. MITTELSTAEDT: 09:09:09

Q. Is that your theory? 09:09:09

A. That's not my -- that's not my theory. 09:09:10

Q. Is it your theory or opinion that Adobe, 09:09:13
anytime it would give a raise to one or more 09:09:16
individual, it would necessarily give a raise to all 09:09:19
or nearly all other employees that you've referred 09:09:21
to as technical, creative or R&D? 09:09:24

MR. GLACKIN: Object to the form. 09:09:29

THE WITNESS: That is not my theory. 09:09:30

BY MR. MITTELSTAEDT: 09:09:33

Q. Under your theory, is that your opinion? 09:09:34

A. That is not my opinion. I don't have 09:09:43
opinion -- an opinion with regard to that specific 09:09:46
question. 09:09:47

Q. Do you have a theory or an opinion that 09:09:50
that was true or is true with respect to any other 09:09:53
defendant in this case? 09:09:57

I haven't done that work. 09:14:56
BY MR. MITTELSTAEDT: 09:14:58
Q. Okay. As you sit here now, can you tell me any way you can possibly form a view on that question? 09:14:58 09:15:00 09:15:03
MR. GLACKIN: Object to form. 09:15:04
THE WITNESS: I would just be speculating and I don't want to do that. If that were my task, I would approach it with some serious effort and been able to answer this question that you raise. 09:15:04 09:15:06 09:15:08 09:15:12
BY MR. MITTELSTAEDT: 09:15:21
Q. What -- yeah, what is your view of the propagation mechanism for suppression of wages that you're talking about here? 09:15:21 09:15:29 09:15:36
MR. GLACKIN: Objection to form. 09:15:38
THE WITNESS: So what I studied is these anti-cold calling conspiracies and that what they do is they limit the information flow with regard to outside opportunities. And there are a variety of ways in which that can have an impact on wages. I can try to list some, but I think it's important that you realize it isn't just through the -- any single channel, but there are systemic effects as well. We can go through a list of possibilities, if you'd like. 09:15:40 09:15:41 09:15:45 09:15:47 09:15:50 09:15:56 09:15:57 09:16:00 09:16:05 09:16:07

BY MR. MITTELSTAEDT: 09:16:08

Q. Well, give me -- give me one propaga- -- propagation mechanism. 09:16:08 09:16:11

A. So an individual at Adobe discovers that there are great opportunities at some other firm and she talks with her friends about that possibility and they talk to other friends, and this creates kind of a social network with regard to outside opportunities. And then the management wisely, if they were aware of that kind of cooler talk, wisely would respond with preemptive compensation increases that would capture the potential threat of the outside job offer. But please understand that my opinion is not limited to that mechanism. There are other mechanisms that may be as important or more important than that simple description of the information flow within Adobe with regard to outside opportunities. 09:16:13 09:16:16 09:16:19 09:16:21 09:16:25 09:16:29 09:16:32 09:16:35 09:16:40 09:16:43 09:16:46 09:16:49 09:16:52 09:16:55 09:16:59

Q. Well, let's start with that -- that one propagation mechanism. In that method, are you saying that the first employee who got the cold call would negotiate a raise with his boss? 09:17:02 09:17:03 09:17:08 09:17:10

A. I don't believe I said that. 09:17:14

Q. No, but I'm asking you. Is that -- 09:17:15

A. This would be -- 09:17:18

Q. Is that one way it would work? 09:17:19
A. Now you're suggesting another channel in which this might have had an impact, but that's not the one that I was describing a minute ago. But I would agree with that question of yours that that would be another way of having an impact. 09:17:21 09:17:22 09:17:27 09:17:29 09:17:31
Q. Okay. So let's take yours then. Your first propagation mechanism is that somebody would get a cold call and he would talk to somebody at the water cooler and then that person would talk to somebody else at the water cooler, and then eventually one of them would go to management; is that one of the steps? 09:17:34 09:17:38 09:17:39 09:17:42 09:17:46 09:17:49 09:17:52
A. Well, management would become aware of this water cooler talk. I'm not so sure it requires specific individuals to take that step. But -- but in order for a salary increase to occur, management has to become aware of the growing outside threat. 09:17:54 09:17:56 09:18:00 09:18:04 09:18:08
Q. And then, again, in sticking with your first mechanism, once management becomes aware of the cold call offer, then the management might decide to give a raise to everybody, right? Is that your first method? 09:18:11 09:18:13 09:18:17 09:18:22 09:18:27
A. You're asking me about all and almost all or you're asking me about as it relates to the cold 09:18:29 09:18:31

call and conspiracies in general. Or you asking me to hypothesize something that didn't occur, which is a single individual didn't receive a cold call because I want to make sure you realize the difference between a single individual and a systemic anti-cold calling agreement. 09:18:36 09:18:40 09:18:43 09:18:46 09:18:47 09:18:49

Q. Okay. 09:18:52

A. And I was asked to not -- not to do anything with regard to specific individuals, but instead to form an opinion with regard to the collective impact of the anti-cold calling agreements on the employees in all these firms. And my opinion, which I guess you've already heard, is that the agreements had the effect of suppressing compensation for all or almost all individuals within the technical class. 09:18:52 09:18:55 09:18:57 09:19:02 09:19:04 09:19:08 09:19:12 09:19:14 09:19:16

Q. Okay. Move to strike as nonresponsive. Here's my question. In your first propagation mechanism, how many cold calls would be required? 09:19:19 09:19:20 09:19:25

A. Can you tell me what you mean by "the first cold calling" -- 09:19:29 09:19:33

Q. You told me there's a lot of mechanisms. And I'm trying to focus on and understand your first mechanism, okay? Are you with me so far? 09:19:34 09:19:36 09:19:41

A. I prefer that you not use the word "first," 09:19:43

but saying that's the first one that we discussed. 09:19:47
That came easily to my mind. So you mean the one 09:19:49
that we discussed a minute ago, that's what you mean 09:19:52
by "first"? 09:19:54
Q. Of course. 09:19:54
A. I don't think "of course" is a completely 09:19:56
appropriate follow-on to what I said. 09:19:59
Q. Move to strike as nonresponsive. 09:20:00
In your first propagation mechanism, how 09:20:02
many cold calls would be required? 09:20:07
MR. GLACKIN: Object to the form. 09:20:09
THE WITNESS: I was not asked to form an 09:20:11
opinion about that. I formed an opinion that these 09:20:13
anti-cold calling agreements, including the systemic 09:20:16
effects, would and can have an impact on all or 09:20:21
almost all employees in these defendant firms. 09:20:24
BY MR. MITTELSTAEDT: 09:20:28
Q. Move to strike as nonresponsive, everything 09:20:28
after "You don't have an opinion." 09:20:31
In this first propagation mechanism, would 09:20:34
management give a raise to all or nearly all, only 09:20:46
if there was an offer of salary in the cold call? 09:20:53
MR. GLACKIN: Object to the form. 09:21:01
THE WITNESS: It depends on the 09:21:05
circumstances. The point would be that management 09:21:07

has an incentive to maintain loyalty within the 09:21:09
firm. Management does not want to have employees 09:21:13
shopping around for jobs because that tends to limit 09:21:15
the connection and the commitment to the mission of 09:21:18
the firm. So it's quite possible that a single 09:21:23
salary offer from another firm would alert 09:21:26
management to the impending threat, not just to that 09:21:31
individual, but more broadly within the firm. Then 09:21:35
they would have to make a judgment as to what was 09:21:38
the best way in order to maintain loyalty and also 09:21:40
maintain fairness inside their structure in order 09:21:44
to -- in order to encourage a work force that is as 09:21:47
productive as possible. 09:21:52

So I'm not here expressing an opinion with 09:21:53
regard to a single cold call or single absent cold 09:21:56
call or with regard to any single individual being 09:22:00
affected. I'm expressing an opinion with regard to 09:22:03
the agreements collectively across the firms and -- 09:22:06
and have the opinion that these anti-cold calling 09:22:13
agreements had the potential and actually did effect 09:22:16
compensation for all or almost all members of these 09:22:20
firms. 09:22:23

BY MR. MITTELSTAEDT: 09:22:24

Q. Okay. Move to strike as nonresponsive. 09:22:24

In the circumstances you've described as 09:22:28

part of this first propagation mechanism, do you agree that sometimes management might decide to make a preemptive KUI pay raise, and in other circumstances management might decide not to? 09:22:31 09:22:35 09:22:38 09:22:41

A. Well, we haven't been very careful in describing exactly the circumstances. And it's possible that there would be some circumstances in which a compensation increase might be limited to a single individual. I don't mean -- I don't mean to say I can't imagine that would occur. 09:22:45 09:22:48 09:22:51 09:22:54 09:22:59 09:23:01

Q. Okay. And in that circumstance -- 09:23:05

A. I want to make sure that this is not within the purview of my expert opinion, which is about the collective cold-calling agreements having an impact on the -- on all employees or almost all. 09:23:06 09:23:08 09:23:12 09:23:15

Q. Okay. In that circumstances could management hearing about the type of thing you just described as a result of cold calls and water cooler talk, in what circumstances could management decide not to make a preemptive pay increase for all or nearly all technical employees? 09:23:18 09:23:20 09:23:23 09:23:27 09:23:29 09:23:34

MR. GLACKIN: Object to the form. 09:23:35

THE WITNESS: I was not asked to form an opinion with regard to that and I have not studied that in detail. 09:23:36 09:23:39 09:23:41

BY MR. MITTELSTAEDT: 09:23:42

Q. In what circumstances? Can you give me any circumstance where management could plausibly decide not to give the preemptive pay raise to all or nearly all? 09:23:42 09:23:44 09:23:47 09:23:50

MR. GLACKIN: Object to the form. 09:23:51

THE WITNESS: I am having a hard time answering this question because it's not something that I worked on. I worked on the task that I was assigned, which was to demonstrate the collective impact of the agreements -- the impact of the agreements overall. 09:24:00 09:24:02 09:24:04 09:24:08 09:24:11 09:24:13

BY MR. MITTELSTAEDT: 09:24:15

Q. Okay. 09:24:15

A. Not with regard to the specific individual that you hypothesize. That's a hypothetical that didn't occur, and therefore, I'm having a hard time using the work that I did, which is studying the actual data sets, to form an opinion with regard to the specific individual. 09:24:15 09:24:17 09:24:18 09:24:24 09:24:26 09:24:30

Q. Okay. Are you offering an opinion that anytime management heard about a cold call with a -- an offer of a higher salary, that management would decide to give a preemptive pay raise to all or nearly all technical employees? 09:24:32 09:24:36 09:24:41 09:24:46 09:24:50

A. I was not asked to study that. I haven't studied that. I don't have an expert opinion regarding that question. 09:24:53 09:24:55 09:24:57

Q. Okay. What is the second propagation mechanism you want to mention? 09:25:08 09:25:11

MR. GLACKIN: Object to the form. 09:25:15

THE WITNESS: So the first one, I guess -- we're kind of playing games with hypothetical mechanisms, but the first one is strictly information flow -- 09:25:31 09:25:33 09:25:35 09:25:36

BY MR. MITTELSTAEDT: 09:25:38

Q. Wait a second. You're the one who says there are mechanisms by which a raise from a cold call could be propagated more broadly, okay? So what are those mechanisms? 09:25:38 09:25:42 09:25:47 09:25:50

MR. GLACKIN: Object to the form, and you didn't let him finish his question -- his answer to your question. He was trying to answer. 09:25:53 09:25:55 09:25:58

THE WITNESS: Well, the important mechanism is the one that we explicitly talked about a minute before, which is that firms need to get ahead of outside competition. And when the outside competition is intense, there's sort of two ways in which they can get ahead. They can get ahead by keeping salaries up or ahead of the outside offer or 09:26:00 09:26:02 09:26:05 09:26:08 09:26:11 09:26:14 09:26:17

they can have anti-cold calling agreements that limit the abilities of the workers to get access to that information. 09:26:21 09:26:24 09:26:27

So that would be a mechanism that would -- a firm would decide that instead of compensating its workers and keeping them happy financially, they would decide to keep their workers in the dark and limit the information flow about outside offers. So that's the mechanism. That's, I think, a very important mechanism that has classwide impact and classwide implications. 09:26:28 09:26:30 09:26:34 09:26:37 09:26:39 09:26:42 09:26:46 09:26:49

BY MR. MITTELSTAEDT: 09:26:51

Q. Any other propagation mechanisms? 09:26:51

MR. GLACKIN: Object to the form. 09:26:54

THE WITNESS: Well, I think Dr. Halleck put on the table a very interesting additional one, which is that these firms use surveys of compensation at other firms as a way of deciding what they need to do in order to keep their compensation systems at the market or above. And in a setting in which the compensation is being suppressed, the surveys are being suppressed as well. 09:27:03 09:27:05 09:27:08 09:27:14 09:27:18 09:27:21 09:27:27 09:27:29 09:27:33

MR. MITTELSTAEDT: And -- 09:27:34

THE WITNESS: So there's a channel -- a 09:27:35

BY MR. MITTELSTAEDT: 09:30:33

Q. And, therefore, you have not formed an opinion on that, correct? 09:30:33 09:30:34

A. I have not formed an opinion about any of the multiple ways in which these cold-calling agreements might have had an impact, except to the extent that I identified them as possible ways that wages could have been suppressed. 09:30:36 09:30:38 09:30:40 09:30:42 09:30:46

Q. Did -- did you -- so as you sit here today, based on the work you've done, can you tell us which propagation mechanism actually was in effect and had the results that you say you found? 09:30:54 09:30:57 09:31:01 09:31:04

MR. GLACKIN: Object to the form. 09:31:07

THE WITNESS: Well, I've already answered that, which is I was not asked to do a desegregation by propagation mechanisms. I was asked to -- to form an opinion at a theoretical level, could these anti-cold calling agreements have an impact and then carry out econometric exercises that would determine the amount of wage suppression that actually occurred. And when I did those econometric exercises, they encompassed all of the -- all the mechanisms by which cold calling would have had a wage-suppressing effect. 09:31:09 09:31:10 09:31:13 09:31:20 09:31:24 09:31:27 09:31:30 09:31:34 09:31:37 09:31:40 09:31:43

BY MR. MITTELSTAEDT: 09:31:44

Q. As you sit here today, based on the work 09:31:44
you've done, can you tell us which propagation 09:31:48
mechanism actually was in effect and had the result 09:31:52
that you say you found? "Yes" or "no," can you tell 09:31:54
us? 09:31:56
MR. GLACKIN: Object to form. 09:31:57
THE WITNESS: I was not asked to carry out 09:31:58
that exercise, so the answer is no. 09:32:01
BY MR. MITTELSTAEDT: 09:32:18
Q. Have you seen anything -- or strike that. 09:32:18
You agree, don't you, that there were 09:32:26
occasions when Adobe gave a raise to one or some 09:32:28
individuals without giving raises to everybody? 09:32:33
A. I have not studied that and I have no basis 09:32:37
for either agreeing or disagreeing with that 09:32:40
statement. 09:32:42
Q. You've tried to separate various factors 09:32:47
affecting compensation into what you call, "internal 09:32:51
and external factors," correct? 09:32:54
A. That's correct. 09:32:55
Q. Do you consider cold calling external or 09:32:56
internal? 09:33:03
A. Well, I think the answer is some of both. 09:33:09
Q. Okay. What do you mean? 09:33:14
A. Well the cold calling is a mechanism 09:33:16

providing -- for providing information about outside 09:33:20
opportunities. In that sense, it's an external 09:33:24
effect. But then the way it's propagated within the 09:33:27
firm, that's a strictly internal effect. That's the 09:33:30
internal equity considerations. So I would -- 09:33:33
bottom line, cold calling is some of both. 09:33:37

Q. Okay. The -- the propagation mechanisms, 09:33:40
you call them hypothetical, the ones you've listed, 09:33:42
the ones that you describe. Do you believe they 09:33:47
existed in the before period, during the alleged 09:33:49
conspiracy, and after the conspiracy, including up 09:33:55
until today? 09:33:58

A. Are you asking me whether there is 09:34:01
information collecting and information sharing in -- 09:34:03
in -- throughout the whole period of time? The 09:34:08
answer is yes. 09:34:10

Q. Do you agree that the vast majority -- 09:34:15
actually, let me stop there. Is "vast majority" a 09:34:18
term of art that has any meaning to you? 09:34:21

MR. GLACKIN: Object to the form. 09:34:25

THE WITNESS: Do you have a context in 09:34:26
which you're using that because usually words mean 09:34:29
something within the contest. So if you could 09:34:32
provide me the context, I possibly could offer an 09:34:33
opinion as to whether that's a term of art or not. 09:34:37

BY MR. MITTELSTAEDT: 09:49:53
Q. Correct. 09:49:53
A. So that in order to draw causal conclusions from a nonexperimental data set, you've got to have a conceptual framework that describes the mechanisms or the paths by which that causal effect had an impact. 09:49:54 09:49:56 09:50:01 09:50:04 09:50:08
Q. Okay. You -- I don't think that answers the question. You've done two things here. You've done a correlation analysis, and then you did what you call a correlation regression, correct? 09:50:10 09:50:11 09:50:13 09:50:16
MR. GLACKIN: Object to the form. 09:50:23
THE WITNESS: I don't think I called it correlation regression, but I did -- I did two kinds of correlations and a variety of data plots and also the regression analysis. 09:50:24 09:50:25 09:50:27 09:50:32
BY MR. MITTELSTAEDT: 09:50:37
Q. Okay. You did a title by title correlation analysis of comp structure. That's one thing you did, right? 09:50:37 09:50:39 09:50:44
A. I did two of those correlation studies. 09:50:45
Q. And then you did title by title multiple regressions? 09:50:48 09:50:50
A. That's correct. 09:50:52
Q. Okay. I'm talking about the first set of 09:50:52

things you did, the correlation analysis. Do you agree you cannot draw any causal conclusion from that first correlation, that first set of correlation analysis that you did? 09:50:54 09:50:56 09:51:01 09:51:05

A. I think that's an overly broad statement, so I disagree with that. 09:51:07 09:51:10

Q. Isn't it true that the correlations you found in that first set before you got to the regression, could come from variables like market forces that operate on numerous titles and thus affect the average of all titles? 09:51:13 09:51:18 09:51:20 09:51:23 09:51:27

MR. GLACKIN: Object to the form. 09:51:29

THE WITNESS: I've already answered that hypothetical in the affirmative, that that doesn't alter the fact that the correlations themselves are evidence and can be interpreted as such. 09:51:30 09:51:32 09:51:34 09:51:37

BY MR. MITTELSTAEDT: 09:51:43

Q. And to see if you could go that far, that's why you did the regressions, right? 09:51:43 09:51:46

MR. GLACKIN: Object to form. 09:51:49

THE WITNESS: "To go that far"? 09:51:50

BY MR. MITTELSTAEDT: 09:51:51

Q. To draw -- to try to draw a causal connection to say what's causing the correlation. That's why you had to do the regression, right? 09:51:53 09:51:55 09:51:58

A. Well, I think the better way of saying it 09:52:01
is their regressions to kind of the sensitivity 09:52:03
analysis. That the correlations themselves, so many 09:52:06
being positive -- the comovements were all these 09:52:07
these titles. I think it's by itself evidence of an 09:52:07
internal structure of the firms and it is a 09:52:13
remarkable degree of comovements. And I agree that 09:52:18
that isn't necessarily a statement about causality, 09:52:22
but still it's a rather remarkable outcome. And 09:52:25
then what I've done is carried out sensitivity 09:52:29
analysis by including other variables that include 09:52:32
the possibility that there are external effects, in 09:52:36
order to demonstrate that those correlations are not 09:52:38
entirely misleading. 09:52:42

Q. Let me ask you the question this way. Do 09:52:44
you agree that the correlation of title compensation 09:52:52
and class compensation that you say you found could 09:52:54
come from variables that operate on both the titles 09:52:57
and the class compensation at the same time, for 09:53:04
example, market forces? 09:53:08

A. Well, I've answered that already in the 09:53:10
affirmative in the previous deposition, but that's a 09:53:12
strictly hypothetical statement. And it may or may 09:53:14
not apply in this setting. And I would say it 09:53:17
actually does not apply. 09:53:20

Q. Are you offering an opinion that the correlations that you found between job titles and technical class compensation averages is necessarily the result of companies using structures that result in a raise for everyone or nearly everyone in the technical class whenever one or some employees get a raise? 09:53:34 09:53:35 09:53:38 09:53:44 09:53:51 09:53:55 09:53:59

A. Well, I use those correlations of evidence of what I've described as a semi-rigid salary structure. And it's that semi-rigid salary structure that allows the sharing of compensation broadly across the firm. 09:54:03 09:54:08 09:54:12 09:54:14 09:54:17

Q. Okay. Allows for the sharing, but doesn't necessarily require it in every instance? 09:54:18 09:54:21

A. I would agree that there might be some cases which you're asking me for some hypothetical increase in compensation that would not -- not materially affect the whole structure. My point isn't that. My point is that there is a somewhat rigid salary structure that allows the systemic classwide anti-cold calling agreements to spread broadly across the firms. 09:54:25 09:54:27 09:54:30 09:54:34 09:54:37 09:54:41 09:54:48 09:54:53

Q. Okay. And was that same structure in place at each of these defendants before the alleged conspiracy? 09:54:55 09:54:58 09:55:01

A. They all -- they all had titles and grade structures for their compensation systems, yes. 09:55:02 09:55:04

Q. And so if your theory were right in the period before the alleged conspiracy, you would expect to see instances where raises for one or some transmitted or propagated into raises for all or nearly all, correct? 09:55:06 09:55:09 09:55:12 09:55:15 09:55:19

A. Well, I've been asked -- I wasn't asked to study this simple hypothetical. 09:55:22 09:55:24

Q. (Inaudible.) (Cross-talking.) 09:55:26

A. I would prefer to say that salary setting is a top down, across-the-firm kind of enterprise. And it's a top down, across-the-board wage setting that causes the sharing. Now, that doesn't mean that there aren't individuals who are -- are slightly out of sync with that whole structure. I'm not talking about individuals. I'm talking about the structure overall plays a role of creating internal equity that would spread not to the -- not a single anti- -- not a single missing cold call, but the whole agreement that spreads the effect of that agreement throughout the firm. 09:55:27 09:55:29 09:55:32 09:55:39 09:55:44 09:55:48 09:55:50 09:55:52 09:55:59 09:56:02 09:56:06 09:56:10

Q. Okay. 09:56:12

A. I'm very -- I'm very sure of that conclusion. 09:56:12 09:56:13

Q. Move to strike as nonresponsive. 09:56:18
If your theory of propagation is right, would you expect to see in the before period, the period without any conspiracy, repeated instances where a raise to one or to some has the result of cold calls led to raises for all or nearly all in the technical group? Isn't that what you would expect to see if your theory was right? 09:56:19 09:56:22 09:56:25 09:56:32 09:56:36 09:56:39 09:56:45
A. No, it's not. 09:56:48
Q. Okay. Can you tell us us how many times in the before period or the after period, a cold call or a series of cold calls led to the kind of propagation that you're talking about, meaning raises for all or nearly all? 09:56:49 09:56:51 09:56:54 09:56:59 09:57:03
A. We don't have the information with regard to cold calling. 09:57:05 09:57:07
Q. You have information with regard to raises, right? 09:57:08 09:57:12
A. We have -- yes, we have compensation with regard to -- compensation information, yes. 09:57:13 09:57:14
Q. Okay. And is it -- under your theory, would raises lead to raises for all or nearly all only if the raises were the result of a cold call, or would raises come from other causes, other reasons also propagate? 09:57:17 09:57:19 09:57:25 09:57:29 09:57:33

A. Can I -- maybe I can help this out a little bit because in the work that I did, I worked with -- the title, if you read the report, the report is very clear with regard to this, that individual data is much influenced by individual idiosyncratic effects. And that doesn't mean that there isn't a firmwide collective effect. And the reason I work with the title data rather than the specific individual data is by taking averages, you tend to eliminate or reduce the impact of the idiosyncratic component. So it's not my opinion that there aren't individual idiosyncratic effects here, which you're asking me over and over. My opinion is that there are firmwide effects. There are very strong firmwide effects. 09:57:38 09:57:40 09:57:44 09:57:49 09:57:51 09:57:53 09:57:58 09:58:01 09:58:04 09:58:07 09:58:10 09:58:14 09:58:18 09:58:20 09:58:23

Q. But you agree they are also because of individual characteristics of employees, occasions when an employee would get a raise without that raise being propagated to others. You agree with that, right? 09:58:24 09:58:30 09:58:33 09:58:35 09:58:39

A. Well, I'd have to study the specific circumstances that you're hypothesizing. 09:58:39 09:58:41

Q. Okay. 09:58:45

A. To find out that -- well, I have the reason. I can think of reasons why it might or 09:58:45 09:58:48

suggest you keep going. 09:59:53
BY MR. MITTELSTAEDT: 09:59:57
Q. In what circumstances -- 09:59:57
MR. GLACKIN: I apologize. I did notice it's been about an hour. I mean, if this is a good time, but you want to get a line, you want to finish, go ahead. 10:00:00 10:00:01 10:00:04 10:00:06
BY MR. MITTELSTAEDT: 10:00:08
Q. In what circumstances would you expect a raise to an individual or to a small number of individuals not to lead to raises for all or nearly all of the technical employees at any of the defendants? 10:00:08 10:00:10 10:00:15 10:00:19 10:00:23
A. I have a distinct impression that I heard that question before. And my answer then is the same answer I'm giving now, which is that was not within the scope of the task that I was asked to perform. 10:00:25 10:00:26 10:00:29 10:00:32 10:00:35
Q. Okay. And, therefore, you don't have any opinion about the circumstances in which that would or would not happen, right? 10:00:37 10:00:39 10:00:41
A. Well, I -- I can speculate as -- as to the possibilities based on my expertise as an economist, but that would be simply speculation. If I were asked for that task, then I would go through it in 10:00:45 10:00:47 10:00:51 10:00:55

great detail. I would prefer not to give you the off-the-top-of-my-head speculation about that question. 10:00:58 10:01:02 10:01:03

Q. Okay. Have you thought, before I just asked you the question or asked you the question 10 minutes ago, of circumstances in which -- on the facts of this case, individuals could get raises without that being propagated to all or nearly all? Have you thought about that before? 10:01:04 10:01:06 10:01:08 10:01:13 10:01:16 10:01:20

A. Well, I've thought about the converse of that, of course, in which effect is propagated. I've given you theories as to why it would be the case. And those are the foundation for the -- (inaudible mumbling) hypothesis to be carried out. 10:01:22 10:01:25 10:01:27 10:01:29 10:01:32

Q. Okay. Because you haven't answered my question, which is have you ever thought about circumstances in which it wouldn't be propagated? 10:01:34 10:01:35 10:01:36

A. I had no need to do that. I -- I carried out the conceptual foundation which allows for the possibility that these cold calling conspiracies had an impact. And then I did the econometric analysis which is broadly enough -- broad enough to encompass the possibility that it has no effect, as well as the possibility it has an effect. So within that econometric exercise, it includes whatever 10:01:41 10:01:44 10:01:47 10:01:52 10:01:54 10:01:57 10:02:01 10:02:04

hypothetical you made a reference to in your question. 10:02:07 10:02:10

Q. Move to strike the last part as nonresponsive. 10:02:11 10:02:13

So you've looked at one side of the issue, but not the other side? You've looked at the extent to which firmwide effects could -- could have an effect, but you haven't looked at the extent to which individual characteristics or what you refer to as idiosyncratic behavior could lead to raises that didn't propagate, is that what you're saying? 10:02:14 10:02:17 10:02:19 10:02:26 10:02:29 10:02:31 10:02:36

MR. GLACKIN: Object to form. 10:02:39

THE WITNESS: Well, I'm just repeating what I said before is that question isn't material to the task that I was asked to perform. 10:02:41 10:02:42 10:02:45

BY MR. MITTELSTAEDT: 10:02:47

Q. So you've looked at one side of the issue? 10:02:47

MR. GLACKIN: Object to form. 10:02:49

THE WITNESS: That is very misleading where I was saying what I said. So obviously the -- in order to carry out an exercise that is intended to estimate damages, you have to think about the mechanism by which the damages might have been -- might occur. But in carrying out that exercise, that doesn't mean you assume the damages. I mean it 10:02:51 10:02:54 10:02:57 10:02:59 10:03:02 10:03:04 10:03:06

could have had -- these agreements could have not had an impact and you allow that as a possibility when you carry out the econometrics. 10:03:09 10:03:12 10:03:16

BY MR. MITTELSTAEDT: 10:03:18

Q. Okay. But don't you also think about the theory that would lead to that conclusion that the agreements didn't have a broad impact? You thought about the theory of how that could happen, right? 10:03:18 10:03:20 10:03:22 10:03:25

A. I -- I -- 10:03:27

MR. GLACKIN: Object to form. 10:03:27

THE WITNESS: I don't see a necessity of having to do that exercise. 10:03:28 10:03:30

BY MR. MITTELSTAEDT: 10:03:31

Q. You say it's speculation, so I'm going to ask you to speculate. In what circumstances would a company give a raise to one or a few or some employees without that raise being propagated? 10:03:31 10:03:35 10:03:38 10:03:41

MR. GLACKIN: Object to form. 10:03:44

THE WITNESS: I can't speculate on that. It doesn't -- it's not helpful. 10:03:46 10:03:49

BY MR. MITTELSTAEDT: 10:03:52

Q. Is your -- are your hypothetical, possible propagation mechanisms, as you've described them, are those specific to cold calling? 10:03:52 10:03:54 10:03:57

MR. GLACKIN: Object to the form. 10:04:03

compensation, but that doesn't mean that every individual is cemented inside that structure. I don't want to suggest that's the case. I wasn't asked to form any opinion as to whether there were any individuals who deviated a little bit from structure. There's nothing -- no opinion I've expressed depends upon that. 10:07:27 10:07:31 10:07:34 10:07:37 10:07:39 10:07:42 10:07:44

BY MR. MITTELSTAEDT: 10:07:47

Q. Move to strike as nonresponsive. 10:07:47

The question is the propagation mechanisms you've talked about that propagates raises and suppression, would those propagation mechanisms work regardless for the reasons of the raise or the suppression? 10:07:49 10:07:54 10:07:57 10:08:04 10:08:07

A. Well, let's be clear as to what I've described as a propagation mechanism. That's limited to the information flow. So we discussed about how the -- the cold -- the missing cold call or any cold call gives an outside -- gives information about the outside possibilities. That's propagated through water cooler talk. That's propagation mechanism. But the structure that I identified, the internal compensation structure is a physical -- is a structure within which all this stuff is put. I haven't spoken to the mechanism by 10:08:08 10:08:10 10:08:12 10:08:15 10:08:17 10:08:21 10:08:24 10:08:28 10:08:31 10:08:34 10:08:36

which unusual events within that structure are propagated. There's no -- I haven't talked about the causal propagation mechanism, except to say that these firms work hard in order to maintain that structure over time. 10:08:40 10:08:43 10:08:45 10:08:49 10:08:52

Q. Move to strike as nonresponsive. 10:08:54

Is it your view that -- is it your view that on occasion when a company decides to give a raise to one or a few employees that raise is propagated into raises for all or nearly all other employees? 10:08:57 10:09:06 10:09:10 10:09:15 10:09:19

A. That's not my view. 10:09:20

Q. Is it your view that when a company decides not to give a raise to one or a few individuals, that that necessarily propagates to all other employees? 10:09:22 10:09:26 10:09:29 10:09:34

A. Well, we're repeating the same thing over and over, which is I've not studied individuals. I've studied the collective. And I was not asked to -- to answer the question that you pose and I don't have an expert opinion with regard to that. 10:09:36 10:09:37 10:09:40 10:09:44 10:09:46

MR. MITTELSTAEDT: Okay. Let's take a break. Let's keep it short. 10:09:49 10:09:51

MR. GLACKIN: Tell us when you want us back. 10:09:52 10:09:54

THE VIDEOGRAPHER: We are off record -- we 10:09:55
are off the record at 10:09 a.m. 10:09:55

(Recess taken.) 10:19:30

THE VIDEOGRAPHER: We're back on the record 10:19:35
at 10:19 a.m. 10:19:36

BY MR. MITTELSTAEDT: 10:19:40

Q. All right. You said that there would be 10:19:41
occasions when -- in the but-for world, there would 10:19:42
be occasions when individuals or groups of employees 10:19:46
would get raises without that propagating. You 10:19:49
referred to it as individual circumstances or 10:19:53
idiosyncratic behavior? 10:19:56

A. Yes, I speculated that was the case, but 10:19:59
that's not something that I've explored. That's not 10:20:02
part of my expert opinion. 10:20:03

Q. Have you attempted to quantify how often 10:20:04
raises to individuals or groups of employees in the 10:20:06
but-for world would not propagate into raises for 10:20:10
all or nearly all? 10:20:15

A. No, I have not. 10:20:16

Q. In the but-for world, is it your position 10:20:19
that sometimes a raise for one employee would 10:20:25
propagate into raises for other employees? 10:20:30

A. I haven't explored that individual 10:20:33
hypothetical. 10:20:35

in the but-for world, there would be occasions where an individual would get a raise as a result of a cold call and that would not lead, would not propagate, would not cause raises for others, correct? 10:24:33 10:24:36 10:24:40 10:24:43 10:24:46

MR. GLACKIN: Object to the form. 10:24:49

THE WITNESS: That's speculative on my part. It's possible. I couldn't exclude it completely, but it's not something I worked on. I worked on the impact of the agreements collectively. And the agreements didn't refer to a single missing cold call; they referred to a whole set -- a large set of missing cold calls. 10:24:51 10:24:52 10:24:57 10:25:00 10:25:02 10:25:05 10:25:08

BY MR. MITTELSTAEDT: 10:25:11

Q. Okay. In the circumstance -- let's hypothesize that as a result of one of your propagation methods, an employee as a result of a cold call got a $10,000 raise and management decided based on the opportunity that this employee would have at some other company and they wanted to keep him, they decided to get give him a $10,000 raise. Are you with me so far? 10:25:11 10:25:12 10:25:16 10:25:19 10:25:24 10:25:27 10:25:30 10:25:34

A. I'm with you so far. 10:25:37

Q. Is it part of your theory that that raise of $10,000 would -- could lead to raises for other 10:25:38 10:25:42

people? 10:25:47

A. That would be part of my theory, yes. 10:25:48

Q. And, in fact, it's part of your theory, 10:25:52 that a raise to that person of $10,000 could lead to 10:25:54 raises for all or nearly everybody else? 10:25:58

MR. GLACKIN: Object to the form. 10:26:02

BY MR. MITTELSTAEDT: 10:26:03

Q. Right? 10:26:03

A. Well, I think that sentence has to be 10:26:03 interpreted a little bit, which is that it's likely 10:26:05 to have a bigger impact for individuals who are 10:26:07 close, who are doing similar things to the -- to the 10:26:11 hypothetical person that you made a reference to. 10:26:16 And in this ripple effect as it goes through the 10:26:18 firm, is going to get smaller and smaller as you get 10:26:21 to employees who are more and more distant. And 10:26:25 what happens is that ripple is going to get so 10:26:26 small, you can't detect it at the -- out there at 10:26:30 the edges. So I would say you're asking me whether 10:26:33 the impact is detectable rather than it's there. I 10:26:36 would say probably at some edge it's not 10:26:38 detectable. 10:26:41

Q. Have you made any analysis of where the 10:26:41 edge is? 10:26:43

A. I've not been asked to do that because, 10:26:44

again, you're hypothesizing a single individual who was affected by this cold calling conspiracy, and it wasn't a single individual. It was a collective that was affected. I mean, you have to worry about systemic effects. 10:26:46 10:26:50 10:26:53 10:26:56 10:26:58

Q. Does it matter to your theory, to your opinion, how many cold calls there would have been in the but-for world? 10:27:00 10:27:01 10:27:05

A. I would say yes and no. I think the econometric exercise that I carried out identifies damage that are suited to the level of missing cold calls. So I don't have the data with regard to the frequency of cold calls the during, before, after the conspiracy. But the econometric exercise identifies the impact of the missing cold calls. 10:27:09 10:27:11 10:27:16 10:27:19 10:27:22 10:27:25 10:27:30

Q. Okay. Move to strike as nonresponsive. 10:27:33

My question is, does it matter to your analysis how many cold calls would have been made in the but-for world -- 10:27:34 10:27:36 10:27:39

MR. GLACKIN: Objection. 10:27:40

BY MR. MITTELSTAEDT: 10:27:40

Q. -- over and above what were actually made? 10:27:40 10:27:42

MR. GLACKIN: Object to the form. 10:27:43

THE WITNESS: It matters in the sense that 10:27:47

I -- that if there were only a single missing cold call, let's suppose, which is your hypothetical, then the econometric estimate of damages is going to be small or perhaps nonexistent. So the point that I was trying to make before is that the econometric exercise has identified a suf- -- a number -- a sufficient number of cold calls without counting them, but sufficient to cause the suppression of wages. 10:27:49 10:27:52 10:27:55 10:27:59 10:28:04 10:28:09 10:28:11 10:28:13 10:28:16

BY MR. MITTELSTAEDT: 10:28:17

Q. Okay. Do you have any view on how many cold calls there would have been in the but-for world? 10:28:17 10:28:18 10:28:22

A. No, I do not. 10:28:23

Q. Do you have a view on whether it was one or 10,000? 10:28:24 10:28:27

A. Big enough to suppress wages, that's what I know. We don't have data -- 10:28:28 10:28:31

Q. That's a little circular, sir. I'm asking, can you quantify the number in a noncircular way? 10:28:31 10:28:34

MR. GLACKIN: Object to the characterization and object to you not letting him finish his answers. 10:28:37 10:28:38 10:28:40

THE WITNESS: Well, I've already indicated you know the answer, which is we don't have the cold 10:28:43 10:28:44

rigid comp structure? 10:38:21

A. There's no simple number that -- that you can refer to. 10:38:25 10:38:26

Q. Is there any complicated number? 10:38:32

MR. GLACKIN: Object to the form. 10:38:34

THE WITNESS: There's no number that is an answer to your question. 10:38:35 10:38:37

BY MR. MITTELSTAEDT: 10:38:37

Q. Is there a range of numbers? 10:38:37

A. Well, there -- there may be, but I wasn't -- the issue isn't whether there was a range. The question is whether the -- the correlation structure that are reported is supportive of the conclusion that there is a somewhat rigid salary structure. 10:38:42 10:38:43 10:38:46 10:38:49 10:38:51 10:38:55

Q. Okay. And -- 10:38:56

A. And -- and the vast -- because the vast majority of large numbers of these correlations are positive, I think that's supportive of the conclusion that there was an internal salary structure at work here. 10:38:56 10:38:58 10:39:03 10:39:04 10:39:06

Q. Okay. What percentage of correlations need to be statistically significant and positive for you to reach that conclusion? 10:39:08 10:39:14 10:39:19

A. Well -- 10:39:21

MR. GLACKIN: Object to the form. 10:39:23

THE WITNESS: So it's important that the statistics that you -- one studies are proven in the context. And -- and we need to realize that the comovements of -- of title compensation -- 10:39:30 10:39:32 10:39:33 10:39:38

THE REPORTER: Of what compensation? 10:39:46

THE WITNESS: Comovement. Comovement. 10:39:50

THE REPORTER: Okay. Of what comp- -- 10:39:50

THE WITNESS: The parallel movement of compensation at the -- 10:39:52 10:39:52

MR. MITTELSTAEDT: Title level. 10:39:52

THE WITNESS: -- at the title level. I've completely lost what I was talking about here. That has to be interpreted in the context in which there's all this documentary evidence that's supportive of a -- of a somewhat rigid salary structure, but I would say all the documents that Dr. Halleck referred to are also very supportive. So we have all this mountain of textual information suggesting that these firms, both HR documents and the deposition testimony, and Dr. Halleck's analysis of it, all adds up to saying that these firms had internal compensation systems that tended to have this semi-rigid structure. 10:39:55 10:39:55 10:39:59 10:40:02 10:40:05 10:40:08 10:40:11 10:40:15 10:40:16 10:40:21 10:40:24 10:40:28 10:40:33

In that context, along comes the data 10:40:36

analysis. So if you didn't have this huge mass of textual information, what you would regard as convincing evidence and numerical evidence in support of that would be a totally different thing. But this data does not stand on its own. It's supported by and it supports the textual information. So the bar is way lower than you seem to want me to say. And my conclusion is I was astounded by the level of correlation that actually occurred in the context of the fact that there's all this -- all this textual information to support this idea that there's somewhat rigid salary structure. So within that context the -- you're way beyond the bar where there's evidence in the correlation structure of a somewhat rigid salary structure. 10:40:38 10:40:41 10:40:45 10:40:46 10:40:49 10:40:51 10:40:53 10:40:57 10:41:01 10:41:03 10:41:08 10:41:11 10:41:18 10:41:20 10:41:22

BY MR. MITTELSTAEDT: 10:41:27

Q. That sounds quite subjective. What I'm trying to do is see if you can make that more objective. 10:41:27 10:41:29 10:41:33

So let's quantify that. What -- what percentage of positive correlations, signif- -- that -- statistically significant positive correlations do you need to -- with all the other evidence you say you've seen -- have confidence that a defendant has what you call a somewhat rigid comp 10:41:33 10:41:38 10:41:43 10:41:45 10:41:49 10:41:54

structure? 10:41:59

A. Well -- 10:42:00

MR. GLACKIN: I object to the form. 10:42:01

THE WITNESS: -- I told you before, I don't have a specific number in mind. I think that no data analyst is going to approach this thing with such a hard, fast rule. And so there isn't one. So don't continue to go down that route, because there's no specific number that applies. 10:42:02 10:42:03 10:42:05 10:42:09 10:42:11 10:42:12

BY MR. MITTELSTAEDT: 10:42:15

Q. Okay. Move to strike as nonresponsive. 10:42:15

If there is no specific number, is there a range of numbers? 10:42:16 10:42:19

MR. GLACKIN: Object to the form. 10:42:22

THE WITNESS: It's playing the same game. Let us -- let's say this, which is that the data that we have in front of us, the statistical results, offer very strong evidence in the context of all this textual information that there is a semi-rigid salary structure. All these firms use that in compensation setting. And it's that semi-rigid salary structure that allows the impact of the anti-cold calling conspiracy to propagate throughout the firm. 10:42:23 10:42:24 10:42:26 10:42:28 10:42:33 10:42:37 10:42:40 10:42:42 10:42:46 10:42:49

BY MR. MITTELSTAEDT: 10:42:50

Q. Allows, but does not necessarily force or require, correct? 10:42:50 10:42:54
MR. GLACKIN: Object to form. 10:42:56
THE WITNESS: Yes, but if we're being argumentative, I carried out the econometric exercise that -- that allows, but does not require there to be damages. And I found out there are indeed damages. 10:42:59 10:43:01 10:43:03 10:43:08 10:43:10
BY MR. MITTELSTAEDT: 10:43:16
Q. Move to strike the last part as nonresponsive. 10:43:16 10:43:17
So when you say that some econometricians -- metricians are con artists, that's something you've said, right? 10:43:17 10:43:19 10:43:22
A. Well, I didn't quite say it that way. The title is, "Let's take the con out of econometrics." 10:43:23 10:43:26
Q. Okay. And one of the cons that you found in fellow econometricians was that they would undertake a study without having any set parameters that would tell them whether their study would successfully prove something or not, right? 10:43:31 10:43:32 10:43:37 10:43:40 10:43:43
A. That's completely not true. 10:43:46
Q. So in going into this study, did you have anything in the standard or any metric in mind as to when you would find -- as to what correlation would 10:43:48 10:43:50 10:43:55

be enough? 10:44:01
MR. GLACKIN: Object to the form. 10:44:02
THE WITNESS: I'm answering the same question again, which is -- the answer is no. And beyond that I don't think anybody -- any statistician would wisely commit to a number like that. 10:44:04 10:44:06 10:44:07 10:44:10 10:44:13
BY MR. MITTELSTAEDT: 10:44:13
Q. Is -- 10:44:13
A. It takes wisdom. It's not just a mechanical exercise where you press a button to get the answer. You have to have an expert that has some significant wisdom in order to interpret this evidence, particularly because we have all this textual information that's providing support for the same conclusion that we have this somewhat rigid salary structure. You have to make use of that in a wise way when you interpret the data evidence. 10:44:13 10:44:16 10:44:18 10:44:20 10:44:24 10:44:27 10:44:29 10:44:33 10:44:35
Q. Move to strike as nonresponsive. 10:44:38
In your regression analysis, is there a rule of thumb or a guideline as to what percentage of job titles need positive and statistically significant coefficient for the contemporaneous relationships variable for you to say that the results are robust and valid? 10:44:40 10:44:51 10:44:54 10:44:59 10:45:01 10:45:05

MR. GLACKIN: Object to the form. 10:45:09

THE WITNESS: No, there's not. 10:45:11

BY MR. MITTELSTAEDT: 10:45:12

Q. Well or any rule of thumb as to what percentage you need in order to support your opinion? 10:45:12 10:45:14 10:45:16

MR. GLACKIN: Object to the form. 10:45:17

THE WITNESS: Repeating the same thing, which is we got all this textual information that you have to make use of and you have to interpret the results in a wise way. You don't want a mechanical approach, which is what you're suggesting. And there's no mechanical approach to this. 10:45:19 10:45:19 10:45:22 10:45:24 10:45:27 10:45:28 10:45:30

BY MR. MITTELSTAEDT: 10:45:31

Q. Okay. So when you look at the results -- let me ask you this way. What results of your correlation analysis would lead you to conclude that your theory was wrong? 10:45:31 10:45:34 10:45:37 10:45:42

A. Well, I would prefer not to answer that because I haven't seen that. I don't prefer. I'd have to see the data set, think about it. But what I did do is I saw the data set as it is, not the one you're hypothesizing. The data set as it is offers, I think, very strong evidence that there were 10:45:43 10:45:45 10:45:46 10:45:50 10:45:54 10:45:58

where is that level? 10:46:45
A. I don't need to name that in order to come to the conclusion that this data set is so far above that level it's immaterial what that level is. 10:46:46 10:46:48 10:46:51
Q. Okay. What is the level? 10:46:54
MR. GLACKIN: Object to the form. 10:46:55
BY MR. MITTELSTAEDT: 10:46:58
Q. What is the level? 10:46:58
A. When I saw it, I would know it. And your hypothesizing that there's some mechanical rule on it, that's -- it's completely antithetical to why use a data set to have that kind of mechanical rule. 10:46:59 10:47:02 10:47:05 10:47:07 10:47:14
Q. Is there any published literature that would have -- tell you what percentage of statistically significant positive correlations you need to conclude that your regression is reliable? 10:47:15 10:47:17 10:47:19 10:47:22
A. Well, there's none that's material because, again, it con- -- it's context dependent. 10:47:27 10:47:30
Q. Okay. But -- 10:47:33
A. You got to make -- you got to make clear use of the context here. So if you've got some kind of econometric exercise, econometric book that says you have to have a certain fraction, that's not wise. That's context free and inappropriate. 10:47:35 10:47:36 10:47:38 10:47:40 10:47:43

MR. MITTELSTAEDT: Let's -- I'm just going to say this. If the witness continues with this type of response, I'm going to get -- you know, I'm going to try and get the judge on the phone at the lunch hour and read some of this transcript because we're not going to finish in seven hours. I just say that. I don't want to argue. I don't want to take up time with it, but I'm just saying -- 10:47:47 10:47:47 10:47:52 10:47:53 10:47:55 10:47:58 10:48:01 10:48:03

MR. GLACKIN: Then why are you saying it, if you don't want to argue, you don't want to take up time? I mean, be my guest. 10:48:05 10:48:07 10:48:07

BY MR. MITTELSTAEDT: 10:48:07

Q. Say for Adobe, the contemporaneous variable is positive and statistically significant only for 6 of the 41 titles that have eleven years' data. And only for 20 of the 41 titles there's a lagged variable. Is that sufficient, in your view, to reach the conclusion you've reached with respect to Adobe? 10:48:07 10:48:14 10:48:20 10:48:24 10:48:27 10:48:33 10:48:39

A. So let's make clear what's going on with regard to this analysis. The first step is to do the correlations two kinds of correlations which I think are very systematic of somewhat rigid salary structure. The next step is to subject those correlations to a kind of sensitivity analysis to 10:48:41 10:48:43 10:48:44 10:48:47 10:48:51 10:48:53

see if you can turn around those conclusions by adding variables that -- that capture two forces: One is the external market force, and the other one is the revenue sharing force. And this is in the context in which you only have 10 observations. So you're really stretching this data set about as far as it can go when you have 4, 5 variables and you only have 10 observations. And within that context the evidence, I think, is very supportive. 10:48:56 10:48:59 10:49:03 10:49:05 10:49:10 10:49:13 10:49:16 10:49:21 10:49:23

There's nothing that's suggested when you control for these other variables that they -- that the external forces predominate. You still see significant impact internally. So, again, this is within the context of this stack of information that says they use internal salary structures. There are very, very important salary structures that determine compensation and -- and -- and then given that you have a weak data set that you only got 10 observations, you push about as far as you can with the number of variables that are included. 10:49:26 10:49:28 10:49:30 10:49:34 10:49:39 10:49:41 10:49:45 10:49:49 10:49:52 10:49:54 10:49:57

The conclusion that I came from, from this result, is that adding those variables did not offset the basic conclusion that these title compensations are tied together closely. 10:49:59 10:50:03 10:50:06 10:50:10

Q. So you're saying statistically significant 10:50:17

positives for 6 out of 41 titles is enough -- 10:50:19

A. Well, I've already -- 10:50:26

Q. -- for a contemporaneous variable, right? 10:50:30

MR. GLACKIN: Object to the form. 10:50:32

BY MR. MITTELSTAEDT: 10:50:33

Q. Is that what you're saying? 10:50:33

A. I'm -- I'm saying that as I looked over 10:50:35 these numbers, they -- they collectively supported 10:50:36 the conclusion that there is an internal salary 10:50:41 setting structure and the goal of this exercise was 10:50:44 an attempt to have a comp horse race between what I 10:50:49 take to be your hypothetical, which is wages are set 10:50:53 by external competition only, versus the weaker 10:50:56 view, which is that internal issues matter. 10:51:01

I don't think you can make the conclusion 10:51:04 by adding these external variables that the internal 10:51:06 effects don't matter. They all stay positive, so 10:51:09 you haven't turned any negative by adding these 10:51:14 other variables. And the number of statistically 10:51:17 significant is going to be limited by the -- by the 10:51:19 size of the data set. 10:51:21

So the fact that they are all positive. 10:51:22 Some are positive significantly different -- 10:51:24 different from zero and others are not. The fact 10:51:28 that they are all positive matters as well. Very, 10:51:30

very supportive of the idea that their salary structure, that is not -- that is not a symptom of external competition. 10:51:34 10:51:37 10:51:40

Q. Okay. If on a weighted basis using all the observations in your regression -- actually, did you do this -- take a look company by company to determine whether there was what you call this somewhat rigid comp structure? Did you go company by company? 10:51:44 10:51:49 10:51:52 10:51:57 10:52:01 10:52:06

A. As you know, you have this printout ahead of you -- in front of you. It's a company by company, title by title analysis. 10:52:07 10:52:08 10:52:10

Q. Okay. And -- and you reached a conclusion company by company? 10:52:13 10:52:13

A. Yes, I did. You'll see in my report there are data displays that show you the fraction of employee years that are entitled to have positive associations with -- with the class compensation. 10:52:16 10:52:19 10:52:22 10:52:26

Q. In other words, when you tried to reach a conclusion with respect to Adobe, did you take into account the correlations for any other companies? 10:52:29 10:52:31 10:52:34

A. Well, not in the technical sense, because there was no technical sharing. But I think in a wisdom sense, there's always positive numbers that come raining down upon you. It's not surprising 10:52:39 10:52:41 10:52:43 10:52:46

that you think that means something. 10:52:50

Q. On a weighted basis, using all the observations in your regression, if the contemporary variable -- variable for Adobe is positive statistically significant 12 percent of the time and the lag variable 25 percent of the time, so that 63 percent of the titles are not positive or statistically significant, does that cause you any concern? 10:52:54 10:52:57 10:53:00 10:53:02 10:53:06 10:53:10 10:53:13 10:53:17

MR. GLACKIN: Object to form. 10:53:18

THE WITNESS: I explained this before. 10:53:18

BY MR. MITTELSTAEDT: 10:53:19

Q. Yes or no, does it cause you any concern? 10:53:19

A. I -- I told you the conclusion that I drew from that evidence, which is that Adobe has this -- this set of regression analyses are supportive of the implications of this stack of information that I referred to before that Adobe has an internal salary setting structure and that it's not simply -- you're not simply seeing so-called market-driven wages. It's not that. 10:53:21 10:53:23 10:53:27 10:53:33 10:53:35 10:53:39 10:53:41 10:53:46

Q. But do those results along with everything else you've seen, enable you to draw a conclusion that Adobe's compensation structure was so rigid that raises for one or a few people would propagate 10:53:46 10:53:48 10:53:52 10:53:57

into raises for all or nearly all of the technical employees? 10:54:01 10:54:04

MR. GLACKIN: Object to the form. 10:54:05

THE WITNESS: Well, we've been through this ground -- over this ground quite a bit. I've not studied any individual. And the structure that we're making a reference to is what supports, what facilitates, what allows the -- the impact of the -- in the anti-cold calling conspiracy to propagate throughout the firm. 10:54:08 10:54:08 10:54:12 10:54:15 10:54:20 10:54:25 10:54:29

BY MR. MITTELSTAEDT: 10:54:30

Q. But I'm asking with respect to Adobe. Do these results for Adobe enable you to draw a conclusion that Adobe's compensation structure was so rigid that raises for one or a few employees would necessarily propagate into raises for all or nearly all of the technical employees, absent the agreements? 10:54:30 10:54:38 10:54:40 10:54:43 10:54:48 10:54:51 10:54:57

MR. GLACKIN: Object to the form. 10:54:58

THE WITNESS: Well, I thought I answered that, but perhaps I didn't. My point is I've done -- I've not carried out an analysis which hypothesizes -- that -- that explores your hypothesis. So I do not have an opinion with regard to that specific hypothesis. 10:55:00 10:55:01 10:55:04 10:55:10 10:55:11 10:55:13

BY MR. MITTELSTAEDT: 10:55:18

Q. Do you have an opinion with regard to that hypothesis for any other defendant? 10:55:18 10:55:20

A. That hypothesis is not material to the task that I was asked to perform, and therefore, I don't have any opinion with regard to any other defendants. 10:55:22 10:55:25 10:55:27 10:55:29

Q. Do you have an opinion that the impact, either an increase or a decrease, on compensation of some -- some individuals would necessarily spread to all or nearly all technical, creative or R&D employees? 10:55:36 10:55:38 10:55:41 10:55:44 10:55:51

A. I'm -- I don't quite understand the hypothetical. Could you repeat that again? 10:55:52 10:55:52

Q. Do you have an opinion that an impact on -- on compensation of some individuals, whether it's an increase or decrease, would necessarily spread and result in an impact, either an increase or a decrease in compensation of all or nearly all technical employees? 10:55:53 10:55:55 10:55:59 10:56:04 10:56:08 10:56:14

A. You're -- I'm having a hard time figuring out this hypothetical because these -- whatever you're referring to as far as an increase of a single individual, somehow that is context, I guess, that leads the firm to want to raise the salary for 10:56:16 10:56:18 10:56:19 10:56:20 10:56:24

that person and leave everybody else alone. And I don't know what that context is. 10:56:27 10:56:30

Q. Okay. But in some context -- let's say it's a result of a cold call. Individual gets a raise because of a cold call. Are you offering an opinion that that would necessarily lead to raises for all or nearly all employees? 10:56:32 10:56:37 10:56:39 10:56:45 10:56:49

A. I think that management would become concerned about individuals who are in a similar category and they would start to respond to that. But that's not the hypothetical that I studied. You understand, I'm talking about the whole impact of the agreements collectively. Not a specific missing cold call, but the collective agreement, which is systemic. It's not the sum of the parts. It's much bigger than the sum of the parts because there's systemic effects. 10:56:53 10:56:54 10:56:58 10:57:02 10:57:04 10:57:06 10:57:11 10:57:12 10:57:17 10:57:19

Q. You're saying based on the systemic effects that management might decide to give raises to more than just a few individuals, more than just the people getting cold calls, and might decide to give raises more broadly. Or, in other circumstances, it might decide not to give raises more broadly -- 10:57:21 10:57:23 10:57:27 10:57:30 10:57:33 10:57:38

A. Well, the -- 10:57:41

Q. -- right? 10:57:41

A. No, that's not what I'm saying. The systemic effect would be a culture of wage suppression. You think of this anti-cold calling agreement symptomatic of a culture of wage suppression. That's a potential systemic effect. In that setting this one person that you hypothesize might not get a raise at all because the firm would be intent on keeping wages as low as possible. But my main point is that we're not making productive use of our time because we keep focusing on individual issues that are not the focus of my analysis. I haven't studied anything with regard to any particular individual, any particular, specific missing cold call. I've studied the impact of the cold-calling agreements, which are classwide agreements on compensation classwide. 10:57:42 10:57:44 10:57:50 10:57:52 10:57:55 10:57:57 10:58:00 10:58:03 10:58:07 10:58:10 10:58:14 10:58:17 10:58:18 10:58:23 10:58:25 10:58:27

Q. The contemporaneous variable is -- for Intuit is statistically significant and positive 74 percent of the time. How can you explain the difference between 74 percent for Intuit and 12 percent for Adobe? 10:58:33 10:58:37 10:58:43 10:58:49 10:58:53

MR. GLACKIN: Object to the form. 10:58:56

THE WITNESS: Well, I don't know what you mean by how could I explain it. It's the data of the data. You compute that number. You get the 10:59:03 10:59:03 10:59:05

opinion in any way? 11:25:22

A. Well, I think I said this before that you cannot take these rows one by one. You have to think of them as a collective. In the case of a correlation analysis, I actually carried out the pulling exercise. For this one we have to do it -- I did it informally. So the answer would be, most of these are positive and kind of big. And if you take that into account, some of these negatives are not so -- not a subject of great concern. 11:25:24 11:25:25 11:25:29 11:25:32 11:25:35 11:25:36 11:25:40 11:25:46 11:25:49

Q. And when you say pulling exercises, what do you mean? What did you pull? 11:25:49 11:25:52

A. We pull -- you pull across the titles. So the analysis that is reported is a title by title analysis. And there's no attempt to pull the data across titles, except in the informal sense. For the correlation analysis, I actually carried out a formal pulling exercise. 11:25:53 11:25:56 11:25:59 11:26:03 11:26:06 11:26:11

Q. Okay. For the -- for the largest job title, Computer Scientist Software Developer 4 -- 11:26:12 11:26:16

A. Yes. 11:26:22

Q. -- do you consider those results to be mixed? 11:26:22 11:26:29

MR. GLACKIN: Object to the form. 11:26:30

THE WITNESS: Those results are compatible 11:26:31

with the conclusion that this title is part of the salary setting structure, the somewhat rigid salary setting structure. 11:26:32 11:26:36 11:26:40

BY MR. MITTELSTAEDT: 11:26:41

Q. Well, are those results -- do they tell you that if anybody elsewhere in the company got a raise, that all of these Computer Scientist Software Developer 4s would get raises? 11:26:41 11:26:48 11:26:52 11:26:54

A. They -- they describe the historical core movements, which would be compatible with your conclusion. But if you are intervening in the system some way that changes the physical characteristics, if your hypothetical is referring to something that didn't happen, then this regression isn't -- isn't material. But historically what's happened instead is that the increase in compensation outside this title tends to produce increases of compensation within this title. 11:27:02 11:27:10 11:27:12 11:27:13 11:27:15 11:27:19 11:27:25 11:27:29 11:27:30 11:27:35 11:27:38

Q. And how does that tell you that? 11:27:39

A. That's the two coefficients. 11:27:42

Q. Which ones? 11:27:45

A. Title 15 and 16. 11:27:45

Q. So the coefficient for column 15 is .6? 11:27:48

A. Correct. 11:27:51

Q. And the coefficient for your two external factors, what you call external, are .88 and .78 -- 79, right? 11:27:53 11:27:54 11:28:00
A. Correct. 11:28:01
Q. So those are bigger than the contemporaneous one, right? 11:28:03 11:28:05
A. They're -- they're -- the .88 is bigger than .60. 11:28:09 11:28:12
Q. Excuse me? 11:28:14
A. .88 is larger than .60. 11:28:14
Q. Okay. And that's the T-stat, right? 11:28:17
A. No, we're talking about the coefficients. 11:28:19
Q. So what you -- I may have said that wrong. You look at the coefficient. Your contemporary coefficient is .26 -- 11:28:20 11:28:22 11:28:24
A. Uh-huh. 11:28:30
Q. -- and your San Jose employment is 3.5 -- .35. And the San Jose coefficient has a higher T-statistic than the contemporary one, right? 11:28:30 11:28:31 11:28:35
A. That's correct. 11:28:41
Q. So how does that support your opinion? 11:28:44
A. Well, I do not have an opinion that external forces don't matter. I do not have an opinion that internal forces do not matter. And what I was exploring with these regression analyses 11:28:47 11:28:48 11:28:50 11:28:53

was the extent to which what I think would be your theory of the case, that internal forces don't matter, the extent to which you could support that by this kind of regression analysis in which you have a kind of horse race between internal and external forces. 11:28:59 11:29:02 11:29:04 11:29:06 11:29:09 11:29:12

So the conclusion -- 11:29:12

Q. So you haven't -- 11:29:13

A. So the conclusion is that they both matter. I believe that. The external forces are going to matter, the revenue sharing is going to matter. But the critical thing is that -- that you've got this somewhat rigid salary structure that comes out very clearly in the statistical analysis. 11:29:13 11:29:15 11:29:18 11:29:21 11:29:22 11:29:27

Q. But you're doing this regression to try and figure out what's causing the correlation, right? 11:29:29 11:29:32

A. I wouldn't describe it that way. 11:29:36

Q. And to the extent external factors are causing the correlation, that undermines your theory that if internal equity -- internal factors that are driving -- 11:29:40 11:29:43 11:29:46 11:29:49

MR. GLACKIN: Objection. 11:29:49

BY MR. MITTELSTAEDT: 11:29:49

Q. -- the correlation? 11:29:49

A. I don't agree with that at all. 11:29:51

Q. Does it trouble you at all that the -- the six largest titles for Adobe have coefficients or T-stats less than 2? 11:29:56 11:30:02 11:30:10

A. Not in the context. Not in this context. Do we need to go back through the context to explain why? 11:30:14 11:30:18 11:30:20

Q. The reason that these results are mixed, as you call them, is not simply because of the number of observations -- 11:30:20 11:30:23 11:30:25

MR. GLACKIN: Objection. 11:30:26

BY MR. MITTELSTAEDT: 11:30:27

Q. Correct? 11:30:27

MR. GLACKIN: Objection. 11:30:28

THE WITNESS: Are we talking about the coefficients or the T-stats? 11:30:35 11:30:36

BY MR. MITTELSTAEDT: 11:30:37

Q. Both. 11:30:38

A. The T-stats are low because the experiment has very few observations, really. And we push the limit of econometrics to have a complicated regression, when you only have, in this case, 11 observations. The -- the low T-stat means the standard errors are big and they are going to tend to get more unusual coefficients in this kind of setting. It's a colon kind of statement. So the 11:30:38 11:30:41 11:30:46 11:30:48 11:30:51 11:30:56 11:30:58 11:31:01

fact that there's some variability that one coefficient is a little bigger than the other, if you put hairbands around that, you wouldn't be making that conclusion at all. 11:31:02 11:31:05 11:31:07 11:31:10

Q. Did you find from these regression models that external factors were not evidence? 11:31:11 11:31:15

A. No, I did not find that. I don't think that's true. 11:31:17 11:31:20

Q. What external factors affect compensation for these companies and affect these correlations? 11:31:20 11:31:26

MR. GLACKIN: Object to the form. 11:31:30

THE WITNESS: I've allowed for the marketplace for software engineers, as measured by this San Jose, MSA employment to be a symptom of the the heat -- the heat in the marketplace. 11:31:31 11:31:32 11:31:35 11:31:39

BY MR. MITTELSTAEDT: 11:31:44

Q. Okay. Why didn't you use CPI? 11:31:44

A. CPI? The Consumer Price Index? 11:31:47

Q. Right. 11:31:57

A. Just it has nothing to do with the external forces for employment. These -- these numbers are all illegal numbers, so they are all adjusted for the CPI. But to think of the CPI as the driver of compensation with title, that seems to be pretty much a stretch. Now, if you find it, that's 11:31:57 11:31:59 11:32:02 11:32:05 11:32:08 11:32:11

symptomatic of the kind of mistake in econometrics that can occur when you throw in nonsense variables. 11:32:15 11:32:17 11:32:21

Q. So would you consider CPI to be a nonsense variable in your conduct regression? 11:32:23 11:32:26

A. I have to look at what you're talking about specifically and -- in order -- before I form -- before I form an opinion on that. 11:32:30 11:32:33 11:32:37

Q. Well, you remember doing your conduct regression, right? 11:32:38 11:32:40

A. I do. 11:32:41

Q. Okay. Would it be nonsense to use the CPI as a variable there? 11:32:42 11:32:45

A. Well, the CPI is embedded in that conduct regression. I know that because the -- 11:32:46 11:32:48

Q. Now, if you -- 11:32:55

A. Talking about real -- real cors- -- real compensation. So it's dollars divided by CPI. You're suggesting that into this kitchen sink full of variables that you want to throw into that equation the suggested CPI. That would be really low on my list of hypotheticals. But I'd have to see exactly how it enters into the equation in order to form an opinion. 11:32:56 11:32:56 11:32:59 11:33:04 11:33:06 11:33:10 11:33:14 11:33:17

Q. On whether you used CPI in your conduct 11:33:18

regression? 11:33:21

A. How it enters and why it's there. You need a conceptual theory about why the level of pricing, not the rate of inflation, but the level of prices would affect the rate of compensation increases. Why it would be operative during the conduct period or not. You need, first of all, conceptual foundations. And secondly, you need to use the right measurements. 11:33:22 11:33:24 11:33:27 11:33:27 11:33:32 11:33:35 11:33:36 11:33:38

Q. Would your contemporaneous -- is it contemporaneous or contemporary? How do you call it? 11:33:40 11:33:45 11:33:46

A. I would say contemporaneous. 11:33:47

Q. Would that and your lag variable also capture the impact of any external variables? 11:33:50 11:33:52

A. Well, the -- the exercise of the regression is attempting to exact from a simple correlation that part which is due to external forces. So the San Jose employment measure is in here. The revenue sharing effect is in there. And after controls for those or removing their effects on the correlation, the answer is the correlation is still there. So that is the sense in which your question is embodied in this regression analysis. 11:33:58 11:34:05 11:34:08 11:34:12 11:34:15 11:34:18 11:34:22 11:34:26 11:34:29

Q. My question is, is the contemporaneous and 11:34:32

lag variables, do they capture the impact of external variables that -- that are not captured by the two that you use, San Jose and revenue? 11:34:35 11:34:38 11:34:42

A. Well, I -- I think the contemporaneous effect is potentially more at risk than the lag effect meaning it's possible that some other measure of the external marketplace could have an impact on the interpretation of the contemporaneous effect. That's really the -- the reason I'm carrying out this exercise with such a simple correlation of these titles could have been driven by external marketforce. That's the contemporaneous effect. But I think the lag effect is going to give you a hard time cooking up an explanation of why when the salary gets out of line with the firm otherwise, why there is corrective action. 11:34:47 11:34:49 11:34:55 11:34:59 11:35:01 11:35:04 11:35:07 11:35:11 11:35:15 11:35:20 11:35:21 11:35:25 11:35:29

Q. So let's talk about the contemporaneous. Why is it at risk for capturing external variables that you didn't otherwise consider? 11:35:30 11:35:33 11:35:40

A. Well, it was your hypothesis that was slung upon me. Or not yours, but the defense's hypothesis that these rather extraordinary code movements, parallel movement year after year, these titles, that that would be a consequence of external market forces. And I said, well, hypothetically it could 11:35:42 11:35:46 11:35:48 11:35:54 11:35:55 11:35:58

be. This is something I hadn't studied. So now I've actually studied that and I've allowed for the possibility that this measure of external market forces is driving that contemporaneous effect. And if the contemporaneous effect is still there after controlling for the external market effect -- 11:35:59 11:36:03 11:36:06 11:36:08 11:36:13 11:36:16

Q. But that -- 11:36:20

A. -- the -- the -- the internal salary structure is still in place. And what I tried to tell you is that there might be other measures that would capture the external marketplace that might lead to somewhat different conclusions. But the point is that I carried out this sort of sensitivity analysis to determine the extent to which those simple correlations stand up when you try to explain them with 2 most prominent variables that I used before, which are the revenue and the San Jose employment variable. 11:36:20 11:36:23 11:36:26 11:36:28 11:36:31 11:36:33 11:36:36 11:36:40 11:36:47 11:36:51 11:36:53

Q. But, sir, to the extent the San Jose employment and the revenue variables do not capture all of the external factors that affect compensation, don't you agree that your contemporaneous variable could capture and be reflective of the impact of other external variables? 11:36:54 11:36:57 11:37:02 11:37:05 11:37:08 11:37:14 11:37:17

A. Well, are you asking me it could or do I think that's a plausible thing going on here? So there's --

Q. Could.

A. Could.

Q. You're the one that said it was at risk. So I'm asking you, when you said it was at risk, do you mean it could be capturing the impact of external variables you're not otherwise accounting for in the two that you picked?

MR. GLACKIN: Object to the form.

THE WITNESS: I -- I -- the answer is yes. I've carried out this exercise trying to remove some of these external effects from the correlation. I found after removing what I thought were the two most important drivers, surprised that we still have very strong internal effects. But I recognize that another model that you might produce would give somewhat different conclusions with regard to internal effects.

BY MR. MITTELSTAEDT:

Q. Okay. And in what respect could your contemporaneous variable be capturing the impact of external variables that you haven't otherwise accounted for?

A. Same thing we were talking about before. 11:38:21
Or not you and I, but in the previous deposition, 11:38:22
which is the parallel movement of these 11:38:27
compensations by title, it could be that external 11:38:29
forces would determine those parallel movements. 11:38:32
I -- in my report I said that's pretty implausible; 11:38:37
that market forces don't tend to give this kind of 11:38:41
parallelism. But I raise the -- the -- I explored 11:38:46
that possibility by -- 11:38:49

Q. What kind of -- what kind of market forces 11:38:51
could produce that kind of parallel movement? 11:38:56

A. I don't know what they would be. I'm -- 11:39:00
the markets that I'm used to working with, gold, 11:39:01
silver, platinum, they don't have that incredible 11:39:03
parallelism. There are different forces that would 11:39:08
drive the outcome for one price than the other. And 11:39:10
when I see that -- those parallel movements, I 11:39:13
immediately think these are administered price. 11:39:16
These are not market prices. These have been set by 11:39:19
the firms and administered. But I recognize that 11:39:20
there could be some external market forces that 11:39:23
would contribute to that. 11:39:29

MR. GLACKIN: If you need -- Bob, I 11:39:32
understand if you need to finish your line but we've 11:39:32
been going way over more than an hour since we last 11:39:33

took, like, a real break. So when you get to a stopping point, it would be great. 11:39:37 11:39:37

BY MR. MITTELSTAEDT: 11:39:44

Q. When we've been talking about this and you say you've been referring to compensation of job title, you mean the average compensation of job title, right? 11:39:44 11:39:47 11:39:49 11:39:51

A. That's correct. 11:39:52

Q. Okay. When -- just before we take the break, you notice that Dr. Kevin Murphy has joined us? 11:39:54 11:39:57 11:40:01

A. I notice that. 11:40:02

Q. Okay. Do you know Dr. Murphy? 11:40:02

A. I know him. 11:40:04

Q. Okay. Personally and by reputation? 11:40:05

A. Yes. 11:40:07

Q. You've noted that you do not consider yourself to be a labor economist, but do you consider Dr. Murphy to be one of the preeminent labor economists in the country? 11:40:08 11:40:10 11:40:12 11:40:16

A. I don't know that the -- the area of labor is pretty broad. For example, Halleck is a labor economist, but he's not the same type of individual as Kevin Murphy. So maybe labor econometrician might be the better way of describing him, rather 11:40:20 11:40:22 11:40:25 11:40:29 11:40:37

than economist. 11:40:37

Q. Describing who? 11:40:37

A. Mr. Murphy. 11:40:39

Q. Okay. And do you consider Dr. Murphy 11:40:39
the -- one of the preeminent labor 11:40:42
econometricians? 11:40:45

A. Yes, I do. 11:40:49

MR. MITTELSTAEDT: Why don't we take a 11:40:50
break? 11:40:51

THE VIDEOGRAPHER: We are off the record at 11:40:52
11:40 a.m. 11:40:55

(Recess taken.) 11:46:17

THE VIDEOGRAPHER: We are back on the 11:46:17
record at 11:54 a.m. 11:54:05

BY MR. MITTELSTAEDT: 11:54:07

Q. Did you test to see if your contemporaneous 11:54:11
variable was picking up external factors not 11:54:15
accounted for in your revenue and San Jose 11:54:21
employment variables? 11:54:24

A. No, I did not. 11:54:26

Q. Are there any tests known to you that would 11:54:27
be available to check that? 11:54:34

A. I'm not sure of the word "test," but what 11:54:36
you might do is explore other measures of external 11:54:39
forces. 11:54:43

Q. Did you -- and then put them in and see if it changed the results? 11:54:44 11:54:47
A. You could do that, yes. 11:54:48
Q. Okay. Did you consider any other external variables? 11:54:50 11:54:53
A. No, I did not. 11:54:54
Q. Did you run this regression with any different variables? 11:54:57 11:54:58
A. No, but you need to put this in the context in which we've got all these -- 11:55:00 11:55:04
Q. Sir, I understand your -- I don't mean to interrupt you, but I don't -- this deposition is not going to end today if you keep telling me the context. I would just assume there is context to everything, okay? Does the coefficient on an external variable -- 11:55:04 11:55:07 11:55:10 11:55:13 11:55:16 11:55:21
MR. GLACKIN: You give answers you feel you need to give. 11:55:22 11:55:23
BY MR. MITTELSTAEDT: 11:55:25
Q. Does the coefficient on the external variable measure their true effects, or would you need to account for the fact that they would also affect the average contemporaneous change? 11:55:25 11:55:27 11:55:30 11:55:33
A. I don't understand that question. 11:55:37
Q. Would you agree that external factors to 11:55:45

outcome, it's not -- simply isn't relevant to the circumstances that we're in. 12:07:13 12:07:14

MR. MITTELSTAEDT: Move to strike as nonresponsive. 12:07:19 12:07:20

BY MR. MITTELSTAEDT: 12:07:20

Q. So let's drill down on how that mechanism would work. An employee or group of employees would get cold calls. And then some or all of the people getting cold calls would negotiate higher raises? 12:07:20 12:07:25 12:07:27 12:07:32

A. Well, there would be -- so there's cold call -- so there's suppressional cold calling in the but-for world -- there all these cold calls that are occurring. And these cold calls are informing the workers of attractive offers on the outside. And then they are going to either leave and take those offers or they are going to have to have a counteroffer inside the firm. 12:07:35 12:07:39 12:07:40 12:07:43 12:07:48 12:07:51 12:07:54 12:07:56

And the firm, through its semi-regulated salary structure, is going to -- and internal equity considerations, is going to spread that beyond the range of the directly affected employees, which are those who in a "but for" world would actually have been receiving the cold calls. 12:07:58 12:08:01 12:08:05 12:08:09 12:08:11 12:08:15

Q. Okay. And what I'm trying to get you to focus on is how that propagation would work from the 12:08:16 12:08:18

employees who received -- would have received cold calls, would have negotiated raises within their existing employer. And so now we've got a group of people, different job titles, with raises. Individuals with raises. My question to you is how does that result in raises to other people in their job title? For starters. 12:08:22 12:08:25 12:08:30 12:08:34 12:08:38 12:08:40 12:08:45

MR. GLACKIN: Object to the form. 12:08:48

THE WITNESS: Internal equity starts to play a role over a time, not necessarily the moment that it occurs, but internal equity is going to force these firms to raise salaries of the people who are directly comparable. There's a sort of sequence of comparisons that these firms are naturally going to rate, and then that's going to permeate throughout the technical class. 12:08:51 12:08:54 12:08:54 12:08:57 12:09:00 12:09:03 12:09:05 12:09:08

BY MR. MITTELSTAEDT: 12:09:11

Q. How about if the person receiving the raise in a particular job title is a high performer? Gets a cold call, he's a high performer, his boss -- his manager says, "I was about to give the guy a raise. Now that he's got the cold call, I am going to go ahead and give him a raise." 12:09:11 12:09:13 12:09:19 12:09:22 12:09:25 12:09:28

Would that manager necessarily give a raise to everyone in that job title, including those who 12:09:31 12:09:33

are low performers for poorer evaluations? 12:09:37

A. On a case-by-case basis, which is not what I'm doing, there is some discretion on the part of management as to how they respond to cold calls, of course. 12:09:41 12:09:46 12:09:48 12:09:51

Q. And so a manager may well decide not to give raises to everybody in a job title just because he gives a raise to one person as a result of a cold call, correct? 12:09:51 12:09:55 12:09:59 12:10:02

A. I would say you better worry about other managers because you've got internals -- equity issues. They are going to spread across managers. So if a firm is aware of these substantial improvements and outside possibilities, they are going to take response -- they are going to respond to that by salary increases, probably very broadly. 12:10:03 12:10:05 12:10:09 12:10:11 12:10:17 12:10:20 12:10:22

MR. MITTELSTAEDT: Move to strike as nonresponsive. 12:10:25 12:10:26

BY MR. MITTELSTAEDT: 12:10:29

Q. I'm focusing on the manager in the group in the job title that gives the raise to one person because of a phone call. 12:10:29 12:10:32 12:10:34

Do you agree that that manager would not necessarily give a raise to everybody in his job title? For example, because some people are 12:10:34 12:10:40 12:10:42

lower -- poorer performers with lower evaluations, and so they don't deserve a raise just because one guy get's a raise. 12:10:48 12:10:52 12:10:55

Do you agree with that? 12:10:56

A. I need to come back to the critical point, which is -- my analysis is all about the collective. In your "but for" world, there's a rain of cold calls falling on Adobe or whatever firm that wouldn't have occurred before. It's the impact of the rain. It's not the impact of one rain drop that I've tried to analyze. And my conclusion is that the rain of cold calls would have spread broadly across the firm because of internal equity issues. 12:10:57 12:10:59 12:11:03 12:11:05 12:11:08 12:11:10 12:11:14 12:11:17 12:11:20

Q. Okay. And that's what I'm focusing on. If you want to tell me that you don't know how this propagation would work, that's fine. But you're starting to go down the road here of walking through with me how the propagation could work. 12:11:24 12:11:26 12:11:29 12:11:31 12:11:34

And so the question to you is, when a manager decides to give a raise to a person in his group, in a job title because of the cold call, you agree that that manager would not necessarily give a raise to everybody else in the job title, correct? 12:11:39 12:11:40 12:11:43 12:11:46 12:11:50

A. Well, they might not even give the raise. They give that response. If it's inconsistent with 12:11:54 12:11:56

internal equity, they might say -- well -- in fact, I've read the deposition testimony that gave that example, which is because of internal equities, that individual you hypothesized getting the huge increase wouldn't be able to get that increase. 12:11:59 12:12:01 12:12:05 12:12:08 12:12:11

Q. So one response to cold calls would be for the manager to say, "We are not going to give you a counteroffer or raise, because if we do that, we are going to get pressure from other people." 12:12:14 12:12:16 12:12:19 12:12:22

That's one possibility, correct? 12:12:23

A. Well, I take that as a symptom of internal equity -- 12:12:25 12:12:28

Q. Sir -- 12:12:29

A. -- which would be operative in the "but for" world in the event that there was a salary increase. 12:12:31 12:12:32 12:12:34

Q. One way -- 12:12:35

A. You're trying to say that internal equity plays an important role in a salary setting inside those firms. 12:12:36 12:12:38 12:12:38

Q. Okay. And your view, based on evidence you've seen, is it because of internal equity, a manager may decide not to give a raise to somebody even though that person got a cold call, correct? 12:12:39 12:12:42 12:12:45 12:12:48

A. That's a hypothetical. 12:12:52

Q. I thought you said you saw evidence of that. 12:12:54 12:12:56
A. There was one case that I read, yeah. 12:12:56
Q. Okay. And so that would be a rational reaction of a manager, correct? 12:12:58 12:13:00
MR. GLACKIN: Object to form. 12:13:04
THE WITNESS: It's probably the reaction of the firm, not the -- 12:13:05 12:13:06
BY MR. MITTELSTAEDT: 12:13:07
Q. It would be a firm wide -- 12:13:07
A. Internal equity consideration. 12:13:09
Q. And a rational one. 12:13:11
MR. GLACKIN: Object to from. 12:13:15
BY MR. MITTELSTAEDT: 12:13:17
Q. Rational. 12:13:17
A. I don't know "rational" because the firm has to worry about commitment on the part of its employees to the mission of the firm. So if somebody leaves to a better paying job elsewhere, that's going to create potential problems internally as well. Now, that is not necessarily the rational decision. In the event that the firm is trying to have a contented happy work force that's committed to the mission of the firm. 12:13:19 12:13:20 12:13:24 12:13:26 12:13:29 12:13:32 12:13:35 12:13:39 12:13:41
Q. Okay. Another reaction or response by that 12:13:44

manager may be to go ahead and give a counteroffer, 12:13:47
give a raise, and try to keep the employee, right? 12:13:51
A. That's correct. That does happen. 12:13:55
Q. Especially if he's a high performer, right? 12:13:57
A. I would say high performance relative to 12:14:01
the compensation that they are receiving. 12:14:03
Q. Okay. And in that circumstance, the 12:14:06
manager may also decide not to give a raise to other 12:14:07
people in the same job title. For example, the poor 12:14:10
performance. 12:14:15
A. That could possibly happen. But again, 12:14:16
nothing I've done that is dependent on individual 12:14:20
linkages that you are making reference to -- or all 12:14:23
this particular sequences that you're forcing me to 12:14:27
comment on. 12:14:30
Q. Okay. And have you studied the extent to 12:14:32
which a manager either in the before period or in 12:14:34
the "but for" world would make a decision not to 12:14:37
give a raise to other people just because they gave 12:14:40
a raise to one? 12:14:43
MR. GLACKIN: Objection. Object to the 12:14:48
form. 12:14:48
THE WITNESS: I've done what I've done, 12:14:49
which is this assessment of the rigid, somewhat 12:14:50
rigid salary structure, which allows the impact of 12:14:54

the anti-cold calling conspiracy to spread throughout the firm. And that didn't require me to start looking at the specific managers, which is an individual event, and it's not material to the task that I was offered -- that I was asked to do. 12:14:58 12:15:02 12:15:05 12:15:07 12:15:11

BY MR. MITTELSTAEDT: 12:15:15

Q. Again, "allows" but it's not necessarily forced or required, correct? 12:15:15 12:15:16

A. I don't know what that dangling sentence is in reference to. 12:15:20 12:15:23

Q. You say the salary structure allows the impact to be felt broadly, and what I'm saying is you've chosen the word "allow" to mean something other than necessarily requires or forces the impact to be felt by all or nearly all, correct? 12:15:24 12:15:29 12:15:33 12:15:37 12:15:43

MR. GLACKIN: Object to the form. 12:15:46

THE WITNESS: I think these correlations suggest something more than just hypothetical. This is actually an operation that that rate structure -- it's not just one time, it's kept solid. Year after year it's held fixed so that's the sense in which the actual evidence of the sharing of compensation across titles. 12:15:48 12:15:51 12:15:54 12:15:55 12:15:59 12:16:02 12:16:07

BY MR. MITTELSTAEDT: 12:16:10

Q. When you say "sharing," you're talking 12:16:10

about propagation, right? 12:16:16

A. If you want to use the word that way. 12:16:17

Q. Well, I mean, "sharing" sounds like somebody brings in a cake and they are sharing pieces of the cake. You're not saying that an employee get's a raise and then says, "Hey, everybody else in my job title, here's part of my raise. I am going to share my raise with you." 12:16:20 12:16:22 12:16:26 12:16:29 12:16:32 12:16:35

You're not using "share" in that sense, are you? 12:16:38 12:16:40

A. Well, hypothetically, there could be some element of that, but that's not what I mean by "sharing." 12:16:41 12:16:43 12:16:45

Q. Well, have you seen any evidence that an employee actually shared part of his raise with co-workers? 12:16:46 12:16:48 12:16:52

MR. GLACKIN: Object to the form. 12:16:53

THE WITNESS: I was not asked to perform that task, and I haven't studied any data set that would allow me to form an opinion on that. 12:16:54 12:16:56 12:17:00

BY MR. MITTELSTAEDT: 12:17:04

Q. Okay. So now we've talk about what the manager might do inside his job title. He might decide not to give a raise to anybody, he may decide to give a raise to one person but no others, or he 12:17:04 12:17:06 12:17:10 12:17:13

may decide to give a raise to everybody, right? 12:17:17
MR. GLACKIN: Object to form. 12:17:19
THE WITNESS: I don't think that these 12:17:21
internal salary structures allow as much flexibility 12:17:23
at the management level as you describe. I think 12:17:26
that manager would have to go to a higher level of 12:17:29
management to decide how to respond to outside 12:17:31
competition. But it's firm-wide and not a 12:17:35
management decision. 12:17:37
BY MR. MITTELSTAEDT: 12:17:39
Q. But let's say that -- well, wait a second. 12:17:39
The manager has discretion to give raises within 12:17:40
salary ranges, right? 12:17:44
MR. GLACKIN: Object to the form. 12:17:47
THE WITNESS: Well, my understanding is 12:17:49
that -- those salary increases are reported higher 12:17:50
up. So all decisions are subject to review. 12:17:54
BY MR. MITTELSTAEDT: 12:17:58
Q. No. My question is does a manager at any 12:17:58
of these companies have the discretion to give a 12:18:00
raise within the salary range for that job title? 12:18:02
MR. GLACKIN: Object to the form. 12:18:09
THE WITNESS: My understanding is what 12:18:11
comes down as a budget, I decide on year-by-year 12:18:12
basis, the manager has discretion on allocating the 12:18:16

budget across individuals. 12:18:20

BY MR. MITTELSTAEDT: 12:18:23

Q. But my question is somebody gets a -- 12:18:23
somebody gets a cold call and does the manager have 12:18:27
discretion to raise that person's salary within the 12:18:33
salary range? 12:18:37

MR. GLACKIN: Object to the form. 12:18:37

THE WITNESS: I don't know enough about the 12:18:42
internal mechanisms by which these firms respond to 12:18:44
outside offers on a timely basis. So there is some 12:18:47
element of discretion, but there is some element 12:18:53
that has to be decided at a higher level up. 12:18:56

BY MR. MITTELSTAEDT: 12:19:00

Q. What evidence do you have for that? 12:19:00

A. That's my -- we talked about my familiarity 12:19:01
with UCLA, I think it's a perfect description of the 12:19:03
wage setting within UCLA. I think it's compatible 12:19:07
with what Dr. Halleck (phonetic) said as well. 12:19:11

Q. I'm not talking about UCLA. I'm talking 12:19:13
about these defendants, these seven companies. What 12:19:18
evidence do you have as to what discretion managers 12:19:24
had at these seven companies? 12:19:28

MR. GLACKIN: Object to form. 12:19:30

THE WITNESS: You're asking me to consider 12:19:32
hypotheticals. I'm giving you additional 12:19:34

hypotheticals, but I haven't studied manager discretion when it comes to responses to cold calling. There's nothing I've done that has studied that issue. 12:19:36 12:19:40 12:19:43 12:19:45

BY MR. MITTELSTAEDT: 12:19:46

Q. So as far as you know, a manager at every one of these companies had the discretion to grant salary increases within a salary range as long as he stayed within his budget? 12:19:46 12:19:48 12:19:52 12:19:56

MR. GLACKIN: Object to form. 12:19:57

BY MR. MITTELSTAEDT: 12:19:59

Q. As far as you know. 12:19:59

A. I'm speculating that's a possibility. 12:20:01

Q. Okay. So within a job title, as far as you know, a manager would have three -- at least three choices when an employee comes and says, "I got a cold call, and I would like to negotiate a raise." 12:20:02 12:20:12 12:20:15 12:20:19

One is to say "no." The other is to say "yes," but not to give the raise to anybody else. And the third would be to say "yes," and give the raise to others within the job title, right? 12:20:22 12:20:27 12:20:29 12:20:32

MR. GLACKIN: Object to form. 12:20:35

BY MR. MITTELSTAEDT: 12:20:38

Q. As far as you know, managers had discretion to do those -- take those actions, right? 12:20:38 12:20:42

A. I have not studied any evidence that would support that conclusion, but I would consider that as a hypothetical, as a possibility. 12:20:44 12:20:47 12:20:50
Q. Have you studied any evidence that said managers didn't have discretion to do those three things? 12:20:53 12:20:56 12:21:00
A. I was not asked to study anything having to do with managerial discretion. 12:21:01 12:21:03
Q. And so you didn't, right? 12:21:05
A. I carried out the task that I was assigned to carry out. 12:21:08 12:21:12
Q. Okay. Now, whatever the manager does within his own job title, another propagation method that we talked about, or another part of this first propagation method is that other job title managers would give raises to their people as a result of cold calling in some other job title, right? 12:21:13 12:21:16 12:21:19 12:21:21 12:21:24 12:21:28
MR. GLACKIN: Object to form. 12:21:32
THE WITNESS: This data analysis is suggestive of that kind of phenomena where the somewhat rigid salary structure allows these things to be propagated across titles. 12:21:33 12:21:34 12:21:38 12:21:43
BY MR. MITTELSTAEDT: 12:21:45
Q. Okay. How does a manager in one job title decide to give raises to his people because 12:21:45 12:21:49

even that company would give a raise to everybody 12:22:59
just because it's giving a raise to a few people, 12:23:01
correct? 12:23:05

MR. GLACKIN: Object to the form. 12:23:05

THE WITNESS: Are you asking me whether 12:23:07
there are cases in which not all employees get a 12:23:09
compensation increase on a year-by-year basis? 12:23:12
That's correct. 12:23:14

BY MR. MITTELSTAEDT: 12:23:15

Q. And so a company -- even a company like 12:23:15
Google can decide to give raises to some people 12:23:20
without giving raises to all people, correct? 12:23:24

A. That's correct. 12:23:27

Q. Okay. 12:23:29

MR. GLACKIN: Good time for lunch? Or not? 12:23:30

MR. MITTELSTAEDT: Let me go to one more 12:23:35
topic. 12:23:37

BY MR. MITTELSTAEDT: 12:23:37

Q. Are changes in compensation permanent? 12:23:37

A. They could be. 12:23:42

Q. In the data you looked at, are changes in 12:23:45
compensation permanent? 12:23:47

A. I'm not sure I know what you mean by 12:23:50
"permanent." 12:23:52

Q. They change. Compensation changes over 12:23:53

time, right? 12:23:55

A. Yes. 12:23:56

Q. Do you -- on your lag coefficient, have you considered whether you are simply reflecting the phenomenon of reversion to the mean? 12:24:00 12:24:05 12:24:09

A. I don't see that as a material consideration except to the extent that is reversion. Mainly, if a particular title gets out of line compared to its historical compensation, reversion to the mean is another way of saying it's brought back in. 12:24:24 12:24:27 12:24:30 12:24:34 12:24:40 12:24:43

So that would be a symptom -- if you call it reversion, it means it's a symptom of being permanent of a salary level title that gets out of line with all the other titles. 12:24:45 12:24:46 12:24:49 12:24:54

Q. So can -- what you have found -- strike that. 12:24:57 12:25:04

What you have found from your lag coefficient, that could simply be the affect of the phenomenon of reversion to the mean; is that correct? 12:25:05 12:25:09 12:25:17 12:25:19

A. I don't think that word should be used in this setting. That's a different kind of phenomenon. This is done dynamic process, a description of a dynamic process, and that 12:25:19 12:25:21 12:25:24 12:25:27

coefficient that is in column 12 indicates the extent to which there are corrective actions that are taken when compensation within a title gets inconsistent with its historical relationship with compensation overall. That's a description of the dynamic process. 12:25:29 12:25:32 12:25:36 12:25:39 12:25:42 12:25:46

Q. Okay. So you use that to mean that there's a manager or higher management or any term you want to use, that actually sits down and compares job title compensation, average compensation to average class compensation, and says, "Because they are out of whack last year, we are going to take corrective action this year for average comp." Is that what you're saying? 12:25:47 12:25:49 12:25:51 12:25:54 12:25:57 12:26:02 12:26:05 12:26:08

A. That's not one for one, but there's a tendency to have corrective action. That's what the data analysis suggests. And it's not simple-minded -- one manager doing this. The firm operates in this way. This is a dynamic description of the firm's wage setting outcomes. 12:26:09 12:26:12 12:26:14 12:26:16 12:26:18 12:26:21

Q. Okay. And what evidence do you have that that actually happened other than whatever you inferred from this coefficient? 12:26:26 12:26:28 12:26:30

A. That is the evidence. 12:26:32

Q. Okay. Thank you. What is reversion to the 12:26:37

mean? 12:26:42

A. Reversion -- an example of reversion to the 12:26:42
mean is that your children will be less intelligent 12:26:44
than you are. Meaning that your average IQ is 12:26:47
higher than the population, and therefore, your 12:26:53
offspring has got to be somewhere between yours and 12:26:55
the average of the population. That's reversion to 12:26:58
the mean. 12:26:59

Q. And that's just a function of the way the 12:27:00
data works, right? 12:27:01

Anytime you're taking a trend like that and 12:27:03
you have somebody, thank you for the compliment, who 12:27:08
is extreme one way or the other -- (Cross-talking.) 12:27:10

MR. GLACKIN: (Inaudible.) -- 12:27:11
mischaracterizes. 12:27:11

BY MR. MITTELSTAEDT: 12:27:13

Q. You are going to see that going down over 12:27:13
time, right? 12:27:17

A. You predict it goes down, but it's not a 12:27:17
sure thing. Your children could end up being 12:27:21
smarter than you are. 12:27:22

MR. GLACKIN: Let the record reflect my 12:27:22
comment was a joke that was meant applied to the 12:27:25
Blackberry. 12:27:32

(Cross-talking.) 12:27:32

BY MR. MITTELSTAEDT: 12:27:34

Q. Do you agree with the statement that regression toward the mean is not based on cause and effect, but rather on random error and natural distribution around a mean? 12:27:34 12:27:36 12:27:40 12:27:44

A. Well, there's an element of that, yes. 12:27:45

Q. Well, what part of that don't you agree with? I'll read it again. "Regression toward the mean is not based on cause and effect, but rather on random error and a natural distribution around the mean." 12:27:47 12:27:50 12:27:52 12:27:57 12:28:07

A. I just don't see where we're going with this because it's still a description of the tendency for these firms to hold the salary structure in place. 12:28:08 12:28:17 12:28:19 12:28:23

Q. Could you answer my question, sir? 12:28:24

A. I don't know that I fully understand what your question is. Perhaps you could phrase it in a different way. 12:28:26 12:28:28 12:28:31

Q. I'm just asking whether you agree with this statement. "Regression toward the mean is not based on cause and effect, but rather than on random error and a natural distribution around the mean." 12:28:32 12:28:34 12:28:37 12:28:40

MR. GLACKIN: Object to the form. 12:28:44

THE WITNESS: That's true in a genetic 12:28:45

setting. 12:28:49

BY MR. MITTELSTAEDT: 12:28:49

Q. Genetic? 12:28:49

A. In the case of your children. 12:28:51

Q. And in the case of my children, there is no -- depends, I guess, on your beliefs. But you're not saying there is somebody out there who actually takes corrective action and says, "Well, because I gave Mittlestaedt whatever IQ I gave him, I'm going to punish his kid." You're not saying that, are you? 12:28:55 12:28:59 12:29:02 12:29:05 12:29:08 12:29:13 12:29:15

A. No, I'm not saying that. 12:29:15

Q. Okay. But in this case, are you saying there are companies that actually sit there and say, "Because we gave the guy a raise last year, relative to the overall class comp, we are going to give him a lesser raise this year"? That they are actually taking what you call corrective action in a deliberate way? 12:29:17 12:29:18 12:29:20 12:29:23 12:29:26 12:29:29 12:29:32

A. I don't know whether it's deliberate or not, but what it's saying is that when you get a certain conversation with the -- in a particular title, it tends to be brought back in line with this historical mean. That could occur just because the further increases are not going to occur. 12:29:34 12:29:47 12:29:51 12:29:52 12:29:55 12:29:58

Q. It could occur just because of the nature of the data analysis you're using. You're developing a trend line and you're saying if you're above the trend line one year, chances are you are going to be coming down the other way the next year, correct? 12:30:01 12:30:03 12:30:07 12:30:09 12:30:12 12:30:15

A. I'm really not picking up the question that you're getting at. 12:30:21 12:30:24

Q. The -- do you agree that the hottest place in the country today is more likely to be cooler tomorrow? 12:30:26 12:30:29 12:30:32

A. I do agree. That would be regression toward the mean. 12:30:32 12:30:35

Q. Okay. And is that because whoever is controlling weather says, "I'm going to give the people a benefit tomorrow because I punished them today"? 12:30:39 12:30:41 12:30:45 12:30:48

A. No. 12:30:48

Q. So that's not corrective action, that's just the way the numbers work because any time you got a trend line and the extreme one way or the other, the next period you are going to be going the other direction, right? 12:30:48 12:30:51 12:30:54 12:30:58 12:31:01

A. I understand all that. I just -- I do not -- 12:31:02 12:31:04

Q. Can you say you agree or disagree with that before you go on to say something else? 12:31:04 12:31:07

A. I agree with this line of questioning with regard to regression toward the mean. I am not sure that applies to what you see in front of you in terms of regression results. 12:31:09 12:31:11 12:31:15 12:31:15

Q. Have you analyzed whether it does or not? 12:31:16

A. I haven't considered that as a possibility. 12:31:19 12:31:21

Q. Okay. Is today -- just these questions, the first time you considered that maybe the phenomenon that you have reported is simply the phenomenon of the reversion of the mean and it's not any deliberate corrective action? 12:31:22 12:31:23 12:31:25 12:31:29 12:31:32

A. Well, let's be sure that what this is saying and what you're saying -- what this is saying is that when a particular title's compensation gets out of line with historical levels, it comes back. 12:31:35 12:31:39 12:31:41 12:31:44

Q. Tends to come back. 12:31:49

A. Tends to come back, correct. 12:31:51

Q. And that could be for the same reason that my children tend to have a lower IQ and that the weather is going to be -- more likely to be cooler tomorrow if it's hotter today, right? Right? 12:31:54 12:31:55 12:32:01 12:32:03

A. No, I don't think that applies. I think 12:32:08

you're hypothesizing measurement error that may not be relevant. In other words, it's not a measurement error that tells you that the computer scientist is getting a high compensation. That person -- that title gets a high compensation.

Q. But also --

THE REPORTER: One at a time.

(Cross-talking.)

THE WITNESS: The regression to the mean is going to be a consequence of the measurement error. So if you get an extreme measurement error at one point, you are going to tend to regress toward the mean. That's the quote that you gave me to ask me if I would agree. It's a reference to measurement error.

BY MR. MITTELSTAEDT:

Q. No, my IQ is not a measurement error in the hypothetical. The temperature here today is not a measurement error, right?

A. It is a kind of a measurement error. It's a random -- a random outcome that has produced the temperature today. There's a predictive -- there's a distribution of potential temperatures at every point around the United States.

And if you get an extreme observation from

12:32:10 12:32:14 12:32:16 12:32:20 12:32:23 12:32:28 12:32:29 12:32:29 12:32:29 12:32:30 12:32:33 12:32:36 12:32:39 12:32:43 12:32:46 12:32:47 12:32:47 12:32:50 12:32:53 12:33:00 12:33:04 12:33:08 12:33:10 12:33:13 12:33:15

one of those -- one draw, then you are going to get a less extreme -- likely to get a less extreme the next time. 12:33:17 12:33:20 12:33:23

Q. Okay. But -- 12:33:24

A. That's a sense in which it's a distribution that applies for every observation. It's a distribution that I'm calling measurement error. 12:33:24 12:33:27 12:33:29

Q. Okay. 12:33:33

A. I don't mean literally the temperature is a measurement error, it's just that there is a random distribution. 12:33:33 12:33:36 12:33:39

Q. What measures -- 12:33:39

A. So then what worries me, and I don't quite understand this, is that you're kind of hypothesizing that if somebody in the firm is flipping coins to decide what salary increase would occur within the title and then they flip a second set of coins a year later, and that's what creates the regression toward the mean. 12:33:40 12:33:42 12:33:44 12:33:47 12:33:50 12:33:53 12:33:57

The first flip of coins produces extreme compensation. The next flip of the coin isn't going to produce such an extreme count -- level of compensation. So I'm telling you I understand what regression toward the mean is. I understand the role that randomness plays in that. I'm very 12:34:00 12:34:01 12:34:06 12:34:08 12:34:11 12:34:13

doubtful that it applies to what you see here. 12:34:17

Q. What do you mean by measurement error? 12:34:20

A. Well, let's say a natural variability that doesn't -- that isn't permanent. You asked me before what is permanent, what's not. So impermanent things that very randomly from observation to observation, those are the things that create regression toward the mean. In other words, it's the randomness in your children's IQ that produces outcome. 12:34:25 12:34:28 12:34:30 12:34:32 12:34:34 12:34:36 12:34:40 12:34:44

Q. And what you're hypothesizing is that there -- you're taking 11 years of data and developing what you call a normal relationship between average comp in a job title and average comp in the class. For starters, right? 12:34:45 12:34:47 12:34:52 12:34:56 12:35:01

A. That misstates the testimony. So what I've done, let's be clear, I've said it before and you get annoyed when I repeat it, but then you seem to forget it. So the headline figure is all these average compensation title by title, all moving in parallel. And that seems inconsistent with an external wage driven outcome -- that you would expect to see some -- much more variable on a year-by-year basis. 12:35:04 12:35:07 12:35:09 12:35:13 12:35:19 12:35:22 12:35:28 12:35:30 12:35:32

And then what I tried to do in this 12:35:34

exercise is to test this view that whether the external market forces and the revenue sharing forces could explain that extraordinary level of co-movement and fully explain it to the extent that you come to the conclusion that internal equity considerations were not playing a role. 12:35:35 12:35:39 12:35:42 12:35:46 12:35:50 12:35:54

So I'm not putting this model forward as being a true model. It's an example of a study that's intended to show you that co-movement -- that incredible parallels and parallelism -- that those data displays -- exhibit -- is not explainable by external market forces and not explainable by revenue sharing. 12:35:55 12:35:57 12:36:05 12:36:11 12:36:15 12:36:20 12:36:22

But at the same time, all those things are going to be present. I don't deny that market matters. I don't deny revenue matters. It's just that internal sharing survives the controls for these other effects. 12:36:23 12:36:25 12:36:27 12:36:30 12:36:34

MR. MITTELSTAEDT: Move to strike as nonresponsive. 12:36:36 12:36:37

BY MR. MITTELSTAEDT: 12:36:39

Q. My question is what your lag variable tries to measure -- starts off measuring what you call the normal relationship between average compensation for a job title and average compensation for all 12:36:39 12:36:49 12:36:57 12:36:59

coefficients support your theory. I understand that. 13:30:10 13:30:12

A. Thank you. 13:30:12

Q. What I'm asking is a different question. What I'm asking is if these coefficients were all just barely above zero, would you still say that's consistent with your theory that there's a semi-rigid pay structure? 13:30:12 13:30:14 13:30:21 13:30:26 13:30:28

I'm trying to get you to tell me what the threshold is for you to conclude that it's supportive of your opinion, sir. 13:30:33 13:30:35 13:30:37

A. Well, I'm trying to let you know that these numbers are so far above whatever threshold one would want to impose that it is clear that there is a semi-rigid salary structure here. 13:30:39 13:30:41 13:30:44 13:30:46

So you're asking me to guess what would be my response if these numbers turned out to be different. It's very hard to do that. Sitting here in front of you, it's very hard to guess. 13:30:50 13:30:52 13:30:55 13:30:58

Q. Are you saying that as long as the job titles have positive coefficients for those two variables, as long as they are above zero, that supports an opinion that a raise to some individuals would necessarily be transmitted into a raise for all or nearly all employees? 13:31:01 13:31:04 13:31:08 13:31:13 13:31:18 13:31:24

MR. GLACKIN: Object to form. 13:31:27

THE WITNESS: There's nothing in my -- any opinion that I've stated that refers to wages -- changes in wages being translated across the firm. The opinion is about the existence of the anti-cold calling agreement, which doesn't affect any individual, but affects a whole collection of individuals across the firm. 13:31:28 13:31:29 13:31:31 13:31:34 13:31:38 13:31:40 13:31:43

So this structure that you see here -- the estimate coefficients that describe the structure, that is consistent with the idea that the structure facilitates the transfer of the impact broadly across the firms. 13:31:44 13:31:48 13:31:52 13:31:56 13:31:59

BY MR. MITTELSTAEDT: 13:32:01

Q. What I'm asking though is if these numbers were lower and closer to zero, would you still say they are consistent with an opinion that the structure was rigid enough that a raise for one or some title would cause a raise in compensation for the whole class or nearly all of the class? 13:32:01 13:32:05 13:32:10 13:32:15 13:32:19 13:32:21

MR. GLACKIN: Object to form. 13:32:25

BY MR. MITTELSTAEDT: 13:32:29

Q. Or are you are not offering that opinion? 13:32:29

A. I'm not offering an opinion about the transmission of specific individual's salary 13:32:31 13:32:32

increase across the firm. So what this is talking about is how the average salary across all titles is translated across the firm into all the titles. 13:32:34 13:32:37 13:32:44

And that's the opinion that I have. This is a somewhat rigid salary structure. Now, as the numbers get smaller, then you might want to put some qualifiers in front of rigid that is a little looser than somewhat. But it still would be transference of the effect across firms -- across the titles as long as these coefficients are positive. But I note that these there not just positive. Many of them are very large. 13:32:46 13:32:51 13:32:56 13:32:59 13:33:03 13:33:04 13:33:07 13:33:10 13:33:13

Q. Okay. You use the term "transmit" to describe the implications of these coefficients. What in your analysis allows you to conclude there is transmission of anything rather than in response to common factors? 13:33:14 13:33:18 13:33:20 13:33:23 13:33:25

MR. GLACKIN: Object to form. 13:33:32

THE WITNESS: We've been over this ground before. So the first step is to look at the correlations, which we talked a little bit about. The concern is that the correlation -- the incredible -- the core movement from title to title might be driven by some other variables. I explored that in this model. It turns out after adding these 13:33:34 13:33:35 13:33:37 13:33:40 13:33:45 13:33:47 13:33:48

additional variables, it's still the case that there is evidence of significant internal sharing. 13:33:53 13:33:55

BY MR. MITTELSTAEDT: 13:34:01

Q. Anything else? 13:34:01

A. Anything else? 13:34:03

MR. GLACKIN: Object to the form. 13:34:07

BY MR. MITTELSTAEDT: 13:34:13

Q. Is that your complete answer? 13:34:13

A. I described what I did and it's a complete description of what I did, but not a description of what I didn't do. 13:34:14 13:34:19 13:34:22

Q. Are you offering an opinion that all or nearly all of the class members would have had higher compensation but for the alleged conspiracy? 13:34:28 13:34:31 13:34:38 13:34:44

A. Yes, I am. 13:34:45

Q. Are you claiming that -- are you offering an opinion that the impact was the same for all class members? 13:34:46 13:34:51 13:34:55

A. No, I am not. 13:34:56

Q. Are you able to -- I think we went over this before, but are you able to tell how quickly or slowly the ripple declined? 13:35:00 13:35:01 13:35:08

MR. GLACKIN: Object to form. 13:35:12

BY MR. MITTELSTAEDT: 13:35:17

Q. The ripple effect. 13:35:17
A. I suppose I would be able or have to carry out some kind of econometric exercise to explore that. 13:35:21 13:35:23 13:35:29
Q. You haven't done that so far, right? 13:35:30
A. I have not done that. 13:35:32
Q. Have you ever evaluated whether compensation of individuals move together? 13:35:34 13:35:36
A. Only to the extent that they are part of their titles -- each individual's within a title. 13:35:39 13:35:43
Q. But within a title, have you evaluated whether individual's compensation within that title moves together? 13:35:46 13:35:49 13:35:51
A. Well, you're asking me whether I carried out this kind of exercise with regard to individuals. The answer is no. 13:35:55 13:35:56 13:35:58
Q. And by this "kind of exercise," you mean a correlation or a regression, right? 13:36:03 13:36:09
A. That's correct. 13:36:11
Q. And have you evaluated whether changes in compensation to an individual caused raises in other individual's compensation? 13:36:12 13:36:15 13:36:18
A. Well, yes to the extent that this data is made up of individual data. 13:36:21 13:36:23
Q. But the only data you're looking at -- the 13:36:25

only way you analyze it is by job title, right? 13:36:27

A. Yes. And each individual is in the job 13:36:32
title. 13:36:35

Q. But you're just looking at average 13:36:37
compensation within the job title, correct? 13:36:38

A. Correct. 13:36:42

Q. And that masks movement of individual 13:36:43
compensation within the job title? 13:36:44

MR. GLACKIN: Object to form. 13:36:47

BY MR. MITTELSTAEDT: 13:36:50

Q. Right? 13:36:50

A. I prefer not to use "mask," but it reduces 13:36:50
the idiosyncratic individual effect, which allows me 13:36:54
to infer statistically the common effect that I'm 13:36:57
trying to get at with these regressions. 13:37:02

Q. It makes it impossible to determine from 13:37:04
the work you've done how much variation there was 13:37:08
within the class among individuals -- excuse me. 13:37:11
Within the job title. 13:37:14

A. What -- I didn't understand that 13:37:16
sentence. 13:37:17

Q. Your use of averaging, your use of average 13:37:20
compensation for job titles makes it impossible to 13:37:23
see from your work the degree of variation of 13:37:29
individual compensation within the job title; is 13:37:34

idiosyncratic behavior because their work ethics can vary, their work habits can vary, their job evaluations can vary, their performance can vary, and their managers evaluations of them can vary, correct? 13:40:05 13:40:11 13:40:16 13:40:19 13:40:22

MR. GLACKIN: Object to form. 13:40:24

THE WITNESS: And other things as well. 13:40:25

BY MR. MITTELSTAEDT: 13:40:27

Q. And even other things, right? 13:40:27

A. Yes. 13:40:28

Q. Okay. Can you tell me from this Exhibit 1 what the variation was in compensation for people within any of these job titles? I think the answer is "no," but I just want to get a clean answer. Is the answer "no" to that question? 13:40:31 13:40:37 13:40:39 13:40:41 13:40:44

A. Well, it's not printed out in this exhibit, but it lies behind -- the data that go into these exhibits is available and has been produced and you can get an answer to that question quite simply. 13:40:46 13:40:49 13:40:54 13:40:58

Q. But that doesn't matter to your analysis, correct? The variation in the individual compensation within a job title. 13:41:03 13:41:05 13:41:08

A. The point of this exercise -- 13:41:11

Q. Does that matter to your analysis, sir? 13:41:12

MR. GLACKIN: Objection. 13:41:14

THE WITNESS: Does what matter? 13:41:17

BY MR. MITTELSTAEDT: 13:41:19

Q. Does the extent of individual variation, of individual compensation within a job title matter to your analysis? 13:41:19 13:41:22 13:41:25

MR. GLACKIN: Objection. 13:41:26

THE WITNESS: What matters is that the individuals share the common effect that afflicts the title of leverage. 13:41:28 13:41:31 13:41:34

BY MR. MITTELSTAEDT: 13:41:37

Q. Does the variation matter? 13:41:37

A. No, not for this exercise. 13:41:42

MR. MITTELSTAEDT: Let me show you -- let me just mark this set as next in order. 13:41:54 13:41:54

THE REPORTER: 92. 13:42:11

MR. MITTELSTAEDT: 92. 13:42:14

(Exhibit 92 marked for identification.) 13:42:19

MR. GLACKIN: Thank you. Is this all in 92? 13:42:20 13:42:22

MR. MITTELSTAEDT: Yeah. You can take off the last one. Take off the last chart. Okay. 13:42:23 13:42:25

BY MR. MITTELSTAEDT: 13:42:34

Q. Okay. These are hypothetical. Okay. The first one illustrates two -- a total compensation of two individuals, and you see the lines go in 13:42:34 13:42:43 13:42:51

opposite directions, correct? 13:42:54
A. I see that. 13:42:57
Q. Okay. The next page takes the average of those two people's total compensation. 13:42:58 13:43:03
Do you see that? 13:43:05
A. I see that. 13:43:06
Q. Does that average look about right? 13:43:06
A. Do you mean have you computed the average correctly? 13:43:10 13:43:11
Q. Right. 13:43:12
A. Yes. 13:43:13
Q. And the next page has two other employees' compensation and their parallel lines. 13:43:14 13:43:19
A. I see that. 13:43:23
Q. And the third and fourth page takes the average of those two lines. 13:43:25 13:43:28
Do you see that? 13:43:31
A. I see that. 13:43:31
Q. Does it look like that average is computed accurately? 13:43:32 13:43:36
A. It appears to be. 13:43:36
Q. If you take on the fifth page, those averages, you would say that the averages move together, correct? 13:43:37 13:43:40 13:43:42
A. That's correct. 13:43:43

Q. When you say that the increase last year was greater or less than the normal increase, how do you measure what is the normal increase? 14:05:55 14:05:57 14:06:04

A. I didn't say that. I tried to say it before and you cut me off -- which is that the -- what the regression analysis does, in effect, it subtracts from each one of these explanatory variables, a historical average, okay. So it's better to think of that variable as the ratio compensation minus the historical average. 14:06:05 14:06:08 14:06:10 14:06:13 14:06:17 14:06:22 14:06:27

And it's going to be -- you are going to revert to the historical average. There's a tendency of these firms to keep their salary structure in line -- by one salary gets out of line to force it back into the average. 14:06:32 14:06:34 14:06:37 14:06:40 14:06:43

Q. By "historical average," you're talking about the -- for a case where you've got 11 years observations, you're talking about the ratio between average comp for the class, average comp for the title over the 11 years, right? 14:06:46 14:06:47 14:06:54 14:06:59 14:07:02

A. Yeah, it's the average of the logarithm, but that's fine. 14:07:05 14:07:08

Q. And then when you have one year where the change for the class or title is more or less than that historical average, that's when you predict the 14:07:11 14:07:13 14:07:18

following year there is going to be a correction where they go back closer to the average, correct? 14:07:23 14:07:25

A. Correct. 14:07:28

Q. What -- as you look at it, what gets a job title out of whack with the class in the first place? 14:07:36 14:07:40 14:07:44

MR. GLACKIN: Object to the form. 14:07:45

BY MR. MITTELSTAEDT: 14:07:47

Q. And by "out of whack," I mean either above -- so it has a change either above or below its historical average change. How does that happen? 14:07:47 14:07:50 14:07:54 14:08:03

A. Well, the mechanism that seems to me to be embodied in this regression is that external forces are operating more strongly on some of these titles than on others, which ends up getting the titles out of whack with the historical relationship with the firm overall. And then these other forces kicking in could bring them back in. 14:08:04 14:08:07 14:08:11 14:08:15 14:08:19 14:08:23 14:08:26

Q. What would be an external force that could do that plausibly? 14:08:28 14:08:30

A. Well, you've got two variables in here which are exclusive. One is the revenue. So the idea where you can have a firm that had an experience of burst in revenue, I think some of the 14:08:31 14:08:33 14:08:35 14:08:37

titles would be more susceptible to revenue sharing than others. And other titles have more external competition with regard to -- and have a closer relationship with that San Jose variable. 14:08:40 14:08:43 14:08:49 14:08:50

Q. Could a cold call or series of cold calls also have that effect? 14:08:53 14:08:57

A. Yes, it could. 14:09:05

Q. Why or how? 14:09:06

A. If you had cold calls that were focused on a particular title set, and the firm felt -- temporarily, I would say, the necessity to increase compensation often by equity grants that would not repeat the next year. But they would feel compelled in order to keep those employees with -- on the books and then the next year, the year after, the year after, that you get kind of a corrective action in which those folks had their day, and they are not going to continue to get the same salary increases everybody else did. 14:09:09 14:09:16 14:09:19 14:09:22 14:09:26 14:09:28 14:09:31 14:09:34 14:09:37 14:09:40 14:09:44

Q. How long does this corrective action take for it to actually happen? 14:09:45 14:09:53

A. So I could probably answer that question because in a sense it's embodying these regressions. It's not immediate. It's not immediate. 14:09:56 14:09:59 14:10:01

Q. How long does it take? 14:10:04

A. Like I said, it's not an exercise that I've carried out, but that coefficient is going to tell you how quickly that corrective action takes place. 14:10:06 14:10:08 14:10:12 14:10:20

Q. If the reaction to cold calls is to give equity grants or bonuses, would you expect that would have less propagation to other individuals and to other job titles if it's an increase in base salary? 14:10:21 14:10:24 14:10:27 14:10:30 14:10:34

A. Well, it could. It's a question of what the information is that the other -- the other workers in the firm -- what information they would have about this. It would depend upon how the firm felt about preempting more problems like this. There's all kind of hypotheticals, sir. 14:10:37 14:10:39 14:10:42 14:10:45 14:10:48 14:10:55

Q. Okay. Haven't you seen evidence that companies gave retention bonuses for the purpose of avoiding any need to give further increases to other employees? 14:10:57 14:10:58 14:11:05 14:11:08

A. I seem to recall something to that effect, but I don't recall that accurately. 14:11:09 14:11:11

Q. Okay. Have you made any study or analysis of the extent to which bonuses or equity grants would be propagated or would not be propagated? 14:11:14 14:11:16 14:11:23

A. Well, this data is all total compensation 14:11:27

data which includes both bonuses and equity grants as well as base compensation. So the data that I'm working with is total compensation. 14:11:29 14:11:34 14:11:37

Q. But you haven't broken that down to see whether it's increases in base salary or increases in bonuses that are propagated, right? 14:11:39 14:11:41 14:11:44

A. That's correct, at least in terms of these exhibits. 14:11:47 14:11:50

Q. And you would expect bonuses or equity grants to be propagated less frequently than increases in base salary, correct? 14:11:51 14:11:54 14:11:57

MR. GLACKIN: Object. 14:12:00

THE WITNESS: I don't know that that's necessarily the case. I could see why it might be. 14:12:02 14:12:04 14:12:07

BY MR. MITTELSTAEDT: 14:12:09

Q. Why might it be? 14:12:09

A. For the reasons I indicated, which is that it's an informational issue and firms may seek to hide the information by using equity rather than base salaries. So I'm not sure that that's a legitimate conclusion. So I really don't know. 14:12:11 14:12:12 14:12:14 14:12:18 14:12:20

Q. If a group of employees gets a larger than normal bonus in one year, you would expect a lower than normal increase the next year, absent a rigid 14:12:22 14:12:26 14:12:29

salary structure -- or absent a somewhat rigid 14:12:34
salary structure, correct -- strike that. 14:12:37
Let me ask that again. With or without a 14:12:39
semi-rigid salary structure, if a group of employees 14:12:44
gets a larger than normal bonus in one year, you 14:12:48
would expect a lower than normal increase the next 14:12:52
year, correct? 14:12:58
MR. GLACKIN: Object to form. 14:13:00
THE WITNESS: I'm not sure what you mean by 14:13:02
"with" or "without." I think that would be a 14:13:04
symptom of the somewhat rigid salary structure. The 14:13:05
fact that you don't have a permanent increase in 14:13:08
base salaries or a permanent increase in the 14:13:12
components of compensation that are not related to 14:13:15
the base. 14:13:18
BY MR. MITTELSTAEDT: 14:13:19
Q. So without a semi-rigid salary structure, 14:13:19
would you expect that if a group of employees gets a 14:13:22
larger than normal bonus in one year, they would get 14:13:25
a lower than normal bonus the next year? 14:13:28
MR. GLACKIN: Object to form. 14:13:33
THE WITNESS: Well, I thought I just 14:13:36
answered that. It seemed to me symptomatic of 14:13:37
internal equity considerations. So these 14:13:43
individuals have a one-time impact, one-time 14:13:48

look at the data and you say over 11 years on 14:15:08
average they got such and such bonuses, right? 14:15:10
A. Yeah, you have to worry about whether the 14:15:15
years that you're looking at are abnormal or normal 14:15:16
years, but you definitely can compute an average 14:15:19
bonus. 14:15:23
Q. And if workers in a job receive a larger 14:15:23
than normal bonus in one year, would you expect 14:15:26
their bonus to be closer to normal the next year? 14:15:29
A. That's almost a rhetorical requirement the 14:15:33
way you described it. 14:15:36
Q. So the answer is yes, correct? 14:15:37
A. Yes. If it goes up and then it goes down, 14:15:39
does it go up and down? The answer is yes. 14:15:41
Q. Actually, my question is a little more 14:15:44
specific than that. If they received a larger than 14:15:46
normal bonus in one year, would you expect their 14:15:49
bonus to be closer to normal the next year? 14:15:52
MR. GLACKIN: Object to the form. 14:15:56
THE WITNESS: Well, that's what these 14:15:59
regressions would suggest. 14:16:00
BY MR. MITTELSTAEDT: 14:16:03
Q. And would you expect to get that result 14:16:03
even without a rigid pay structure? 14:16:05
A. I think that's symptomatic of a rigid pay 14:16:07

structure, namely, you are not going to have a permanent dislocation in your pay structure. 14:16:11 14:16:14

Q. So are you saying you would get that result only if you had a semi-rigid or rigid pay structure? 14:16:16 14:16:18 14:16:22

A. No. 14:16:22

Q. You would get it with or without, correct? 14:16:23

MR. GLACKIN: Object to form. 14:16:26

THE WITNESS: I still think that what we're talking about is a symptom of sharing arrangements in which you offer a one-time, but not a permanent -- 14:16:31 14:16:34 14:16:37 14:16:42

MR. TUBACH: Bob, just keep asking the questions. 14:16:42 14:16:44

I'm sorry, Bob. My apologies. 14:16:45

MR. GLACKIN: Is everything all right? 14:16:47

MR. TUBACH: Yeah, I'm fine. 14:16:47

MR. MITTELSTAEDT: I think there is an expression of frustration from the witness not answering the questions. 14:16:47 14:16:55 14:17:00

BY MR. MITTELSTAEDT: 14:17:01

Q. My question is: Are you saying you would get those results with or without a semi-rigid or rigid pay structure? 14:17:01 14:17:02 14:17:09

MR. GLACKIN: Object to the form. 14:17:16

THE WITNESS: Well, I thought I answered it, and I'm afraid that if I give the answer again, we're going to have another interruption from this fellow at the end. 14:17:19 14:17:20 14:17:21 14:17:24

But I would include bonuses and equity compensation within the total compensation variable, and that will have the feature that you're describing, which is if you do a one-time increase in bonus or equity and you maintain your base salary as it is -- a one-time increase -- then you are going to have this sort of reversion to the mean effect. 14:17:25 14:17:30 14:17:33 14:17:36 14:17:39 14:17:44 14:17:46 14:17:49

It's just like you said. It's going to go up and come back down. But then the question is how do we interpret this? I'm interpreting as a somewhat rigid salary structure, meaning that you are not going to let any individual get permanently out of line with everybody else. 14:17:49 14:17:51 14:17:54 14:17:57 14:18:01 14:18:05

BY MR. MITTELSTAEDT: 14:18:07

Q. Would you get that result only if you have a semi-rigid or rigid pay structure, or would you get it without a semi-rigid or rigid pay structure? 14:18:07 14:18:10 14:18:13

MR. GLACKIN: Object to form. 14:18:21

THE WITNESS: I have a hard time understanding what your question is because I'm 14:18:22 14:18:24

BY MR. MITTELSTAEDT:

Q. And by semi-rigid, I'm using your definition. And by non semi-rigid, I'm using any company with a salary structure less rigid than you say.

Is the phenomenon that we've been talking about, namely, job title -- an employee that receives a bonus higher than normal one year, and receives a closer to normal bonus the next year, does that happen only in a company that you say has a semi-rigid to rigid pay structure, or does it happen in companies with a less rigid pay structure --

A. Well --

Q. -- less than somewhat rigid or whatever term you want to use.

MR. GLACKIN: Object to the form.

THE WITNESS: We need to be clear with regard to definition. I've tried to make the definition clear before, which is -- I'm going to refer to a semi-rigid salary structure as an attempt -- as a system of salary setting that allows the firm to keep salaries in line over time.

And what you described as a one-time bump up in bonus compensation followed by a reduction,

that might be a symptom of a firm that's trying to keep things in line, but it might be something else. But it's certainly consistent with the fact that a firm is trying to keep compensation in line. 14:26:15 14:26:18 14:26:21 14:26:23

BY MR. MITTELSTAEDT: 14:26:28

Q. Okay. So are you saying that this phenomenon that we've been talking about could plausibly happen in a company without what you call a semi-rigid to rigid pay structure? 14:26:28 14:26:32 14:26:34 14:26:39

MR. GLACKIN: Object to the form. 14:26:46

THE WITNESS: Well, you're asking me to speculate about some hypothetical company that assigns bonuses, temporary bonuses, but doesn't do that in attempt to maintain salary structures. I suppose I could hypothesize that, but I want to say over and over again, this is consist with a firm that is worried about internal equity considerations and therefore does not want to have a permanent distortion in this compensation system. 14:26:48 14:26:49 14:26:52 14:27:00 14:27:02 14:27:07 14:27:10 14:27:14 14:27:16

BY MR. MITTELSTAEDT: 14:27:17

Q. If you have a company that has no sharing, to use your term, no internal equity, would you still expect to see this reversion to the mean in terms we've been talking about, higher than normal bonus one year, closer to normal bonus the next 14:27:17 14:27:19 14:27:26 14:27:29 14:27:32

year? 14:27:36
MR. GLACKIN: Object to the form. 14:27:37
THE WITNESS: You're asking whether that could happen? 14:27:39 14:27:41
BY MR. MITTELSTAEDT: 14:27:41
Q. Whether you would expect to see it, plausibly. 14:27:41 14:27:43
MR. GLACKIN: Object to the form. 14:27:44
THE WITNESS: Well, I'm speculating as to what I would expect, but I guess it could occur. It could occur. 14:27:46 14:27:48 14:27:51
BY MR. MITTELSTAEDT: 14:27:52
Q. And how could it occur? 14:27:52
MR. GLACKIN: Object to the form. 14:27:53
THE WITNESS: Seems to me that I shouldn't have to speculate about the -- your hypothetical that given the argument as to why this kind of compensation system is still compatible with -- or consistent with a semi-rigid salary structure. 14:27:56 14:27:57 14:28:02 14:28:08 14:28:12
BY MR. MITTELSTAEDT: 14:28:16
Q. You consider yourself objective? 14:28:16
A. Yes, I do. 14:28:18
Q. Okay. So now you've given me the argument for that side. I would like an argument for the other point of view. The other point of view is 14:28:19 14:28:21 14:28:24

that this kind of reversion to the mean would also occur in a company with no sharing, no internal equity. 14:28:26 14:28:31 14:28:34

MR. GLACKIN: Mr. Mittlestaedt, you're entitled to ask him questions. You're not entitled to tell him what to do and what to say. So please ask a question. 14:28:34 14:28:36 14:28:39 14:28:42

MR. TUBACH: Mr. Glackin, I assume you're familiar with the court order entitling you only to make objections as to form. I'm going to ask you to follow it. 14:28:42 14:28:45 14:28:47 14:28:50

MR. GLACKIN: I'm preventing serious abuse and harassment of the witness. The record is the record. If you've got a question, ask the question and he'll answer. 14:28:50 14:28:52 14:28:54 14:28:56

THE WITNESS: Can we have a break, please? 14:28:56

MR. MITTELSTAEDT: I would like an answer to this question first. 14:28:58 14:29:00

(Cross-talking.) 14:29:01

MR. GLACKIN: There is no question -- there is no question pending. There is no question pending. This is a deposition, not an argument. 14:29:01 14:29:03 14:29:13

BY MR. MITTELSTAEDT: 14:29:16

Q. Okay. If a company has no sharing, to use your term, and no internal equity, in what 14:29:16 14:29:20

Is it correct that you don't have any evidence of corrective action, except for what you infer from your regression analysis? 15:06:21 15:06:23 15:06:29

A. That's correct. 15:06:35

Q. Have you ever looked to see if there was any documentation, any documents or any deposition testimony supporting that? 15:06:36 15:06:37 15:06:39

A. Well, there's a mountain of evidence that these firms are worried about internal equity and making sure that salaries are -- are in control across the titles. 15:06:40 15:06:42 15:06:46 15:06:48

Q. No, but I'm talking about this kind of corrective action where they -- they raised or lowered a job title based on doing an analysis of the last year's raise or decrease? 15:06:53 15:06:55 15:06:58 15:07:05

A. I think there's plenty of documentary evidence in support of the concern on the part of all these firms with internal equity issues. And internal equity means that if an individual or a title gets out of line, they are going to take steps to bring it back in line. 15:07:08 15:07:09 15:07:13 15:07:14 15:07:16 15:07:20

Q. Out of line with respect to where average compensation for that job title is out of whack with the normal relationship with average compensation to the class? 15:07:22 15:07:24 15:07:29 15:07:30

A. Well, that's -- that's an econometric interpretation of being out of line. And actually, that interpretation makes it less likely that you'll find the sharing effect, because it could be the sharing is more specific to particular pairs of titles, rather than to this general sharing that I've estimated. But the general sharing is going to make it, then, harder to identify because that variable is measured there, relative to the hypothetical model that you have in mind. 15:07:31 15:07:34 15:07:36 15:07:39 15:07:42 15:07:46 15:07:51 15:07:53 15:07:58 15:08:00

Q. Would the existence of one-time grants generate a lag sharing effect, absent any corrective action? 15:08:04 15:08:06 15:08:10

A. It could. 15:08:12

Q. In what circumstance? 15:08:14

A. Well, you've described mechanically the data set that would have that feature. In other words, the salary -- total salary goes up with a one-time grant. One-time grant disappears so that the total salary then comes back in line. But I interpret the fact that the firm chose to do a one-time grant and not a permanent increase as a symptom of a firm that's trying to keep salary structures in mind. 15:08:18 15:08:18 15:08:20 15:08:24 15:08:27 15:08:31 15:08:33 15:08:38 15:08:42

Q. Do you know about Google's -- Google's 15:08:45

grants? Yeah, Google's forever grants? 15:08:53
A. I can't remember that one. 15:08:54
Q. Okay. Assume they are large grants to a particularly valuable employees. What are you looking at? 15:08:58 15:09:03 15:09:08
A. I was wondering if I had Google in here. Is that a problem? 15:09:08 15:09:11
Q. Well, if you'd listen to the question -- if you need to look at something, tell me. But I'd like you to answer the question without looking at anything, if you would, just so we have a clear record of what you're doing. 15:09:13 15:09:14 15:09:16 15:09:20 15:09:22
A. Or what I'm not doing. 15:09:23
Q. Did -- move to strike as nonresponsive. 15:09:26
Did -- 15:09:28
MR. GLACKIN: There was no question. 15:09:29
MR. MITTELSTAEDT: That's why it was nonresponsive. 15:09:30 15:09:34
Q. Did -- assume that Google gave special grants to highly valued employees. Do you have any opinion that those special grants caused increases to nonrecipients of the grants? 15:09:36 15:09:39 15:09:44 15:09:48
MR. GLACKIN: Object to the form. 15:09:53
THE WITNESS: I have not studied that. I have not studied that. 15:09:54 15:09:56

S&P index, but I quickly came to the conclusion that I wouldn't make that mistake. 15:29:49 15:29:52

Q. Why? Well, actually, that's what you've said before. 15:29:54 15:29:56

A. I've said that before. 15:29:56

Q. Okay. Did you construct a 4,000 by 1 vector, when estimating the title class correlations? 15:29:58 15:29:59 15:30:08

A. This is some kind of a trick question in estimation, but in order to compute an average composed of 4,000 individual titles, in a sense you have to have that -- that -- you have to know the title compensation for each one of those components. So -- so the average -- computing average over these 4,000 titles might in some technical sense be described as beginning of the vector of 4,000 variables and then collapsing into a single number, but I can't believe that that's the intent of that question. 15:30:09 15:30:11 15:30:15 15:30:19 15:30:21 15:30:25 15:30:30 15:30:34 15:30:36 15:30:42 15:30:43

Q. In -- in what circumstances would you expect high correlation between average compensation for one job title and overall average compensation of all job titles? 15:30:44 15:30:47 15:30:49 15:30:53

MR. GLACKIN: Object to the form. 15:30:57

THE WITNESS: Well, let's be sure you know 15:30:58

what I've done, which is I've removed the -- in each one of these correlations, I removed the title from the class. So we're looking at correlations between the title and the class X the title. And I would expect to see a strong correlation there, in the event that a firm had a somewhat rigid salary structure. 15:31:00 15:31:04 15:31:07 15:31:09 15:31:14 15:31:17 15:31:24

BY MR. MITTELSTAEDT: 15:31:26

Q. By definition, right? 15:31:26

A. I don't think that's a definition, that's a symptom of a somewhat rigid salary structure. 15:31:28 15:31:30

Q. Okay. In what other circumstances would you expect to find high correlations? 15:31:33 15:31:36

A. We're coming back to the point that we covered in other depositions and this one as well that it's hypothetically possible that these correlations between structure and class overall are driven by things that are affecting their performance of the firm, like revenue, are driven by external competition, like San Jose employment number, and that's the whole point. I'd say, compute the correlations, here's the end of deposits, you deal with levels and also with the differences of both profits, and then you subject that to some scrutiny, kind of a sensitivity 15:31:39 15:31:41 15:31:45 15:31:46 15:31:53 15:31:55 15:31:59 15:32:01 15:32:04 15:32:06 15:32:09 15:32:12

analysis to see the extent to which you still see the sharing forces operating, after you controlled for what seemed like the most promising two variables that would also affect compensation at these firms. 15:32:14 15:32:20 15:32:21 15:32:24 15:32:27

Q. Would you think a pay freeze at one firm would lead to high correlation between average comps for job titles in overall average comp? 15:32:29 15:32:32 15:32:35

A. Well, I mean a one-time pay freeze. I don't mean a permanent pay freeze. So one or a temporary pay freeze could -- could cause that outcome, yes. 15:32:45 15:32:47 15:32:50 15:32:53

Q. Could an increase in stock value? 15:32:54

A. You mean the S&P 500 or do you mean the -- 15:33:01

Q. The companies. 15:33:03

A. Well, I have that force here. I think you're really talking about success of the firm, which is revenue. And the stock price is going to be a symptom of a firm that's successful in having high revenue. So it's the fact that I already have the revenue in there, it doesn't seem to me that the -- that a stock price should also be included in there. 15:33:04 15:33:06 15:33:08 15:33:12 15:33:14 15:33:16 15:33:19 15:33:21

Q. If a company has 85 percent of its employees outside the Silicon Valley do you think 15:33:23 15:33:27

it's still appropriate to use San Jose's employment -- 15:33:30 15:33:33

A. Well -- 15:33:33

Q. -- as a variable? 15:33:33

A. -- I think it's worth talking about. Then the question is, how are you going to characterize the -- the global market for -- for software. And my premise is that SMP -- I mean, that the San Jose employment is going to be an adequate proxy for that. But I agree that there could be other variables that would be relevant to a global demand that could also play a role. 15:33:35 15:33:38 15:33:41 15:33:46 15:33:51 15:33:55 15:33:57 15:34:01

Q. So before deciding to use San Jose, did you make any analysis of where these employees were located? 15:34:03 15:34:05 15:34:08

A. Well, I knew -- I knew where they were located. I studied the -- the payroll records. 15:34:09 15:34:12

Q. Okay. Where -- where are Intel's -- 15:34:16

A. You know, you're asking me to remember something I don't know. I can't remember. But I knew it at one point. And obviously, I was concerned about having a San Jose indicator, which is not the city, but the SMSA, by the way. So I was concerned about using a San Jose indicator and what is really a geographically broader marketplace. 15:34:17 15:34:21 15:34:22 15:34:24 15:34:28 15:34:32 15:34:35

go back to 2001 because you expected that that would increase the correlation? 15:35:56 15:35:59

A. No, that's absolutely not the case. 15:36:02

Q. Did the compen- -- what happened to the compensation for these seven companies' employees from 2001 to 2003? 15:36:10 15:36:10 15:36:15

A. They varied. 15:36:19

Q. Do you expect a greater correlation when compensation is dropping due to external forces? 15:36:21 15:36:23

MR. GLACKIN: Object to the form. 15:36:28

THE WITNESS: Can you at least state -- restate that question or state it again? 15:36:34 15:36:35

MR. MITTELSTAEDT: Yeah. 15:36:37

THE WITNESS: I'm not sure I fully understand it. 15:36:37 15:36:38

BY MR. MITTELSTAEDT: 15:36:39

Q. Do you expect a greater correlation between the things you're measuring there when compensation both overall company and job title is dropping due to external forces, like a recession? 15:36:39 15:36:42 15:36:45 15:36:51

A. Well, the critical thing is the nature of the experiment. So dropping would offset by rising would be a test bed for determining the correlation between a title and the overall class. So it could be that -- that what's happening in the recession be 15:36:55 15:36:59 15:37:02 15:37:06 15:37:09

relevant, but it may not be. 15:37:12
Q. Well, if a company -- if there's a 15:37:26
companywide drop in compensation, by definition 15:37:26
that's going to affect all the titles, right? 15:37:28
A. No, that's not the case. 15:37:31
Q. Um -- 15:37:41
A. Well, I -- I -- I missed that, yeah. If 15:37:42
companywide, meaning the company decided every title 15:37:42
is going to be affected, every individual is going 15:37:46
to be affected, then it -- then it's companywide. 15:37:49
Companywide is companywide. 15:37:51
Q. Okay. Look at Paragraph 53 of your 15:37:54
supplemental report. 15:37:56
A. What page is that on? 15:38:00
Q. Page 23. 15:38:04
A. Yes. 15:38:09
Q. Okay. You say, "This is important since 15:38:10
the early years from 2001 to 2003 had a sharp 15:38:12
decline in technical class compensation for Adobe, 15:38:16
as illustrated in Figure 13." And you see Figure 13 15:38:19
shows a sharp decline for Adobe? 15:38:25
A. I do see that. 15:38:28
Q. And then you say, "These early years are 15:38:30
thus an important test bed for identifying which 15:38:34
titles move together." What did you mean by that? 15:38:36

A. Well, I suppose instead of 13 -- the Figure 15:38:39
13 is -- that's salary was completely flat over 15:38:42
time, no variability whatsoever. So what's ever 15:38:47
happening on a title level would have zero 15:38:49
correlation with the class. It's not an expected 15:38:53
experiment to see whether the -- it would have no 15:38:53
impact on the title. It's not an effective 15:38:56
experiment to decide whether that title moves with 15:38:58
total compensation or total compensation is 15:39:01
completely flat. Meaning, some variability of 15:39:04
treatment. The treatment being the technical class 15:39:06
average compensation. So the fact that the 15:39:09
treatment was declining was -- very substantially 15:39:13
the first two years, that's a great test bed because 15:39:16
you want to see whether the titles -- other 15:39:20
titles -- what a -- specific titles were also 15:39:22
sharing in that decline. The fact that it's 15:39:25
increasing for 2005 - 2007. It's like doing a 15:39:28
sequence of experiments. If you maintain the 15:39:32
treatment completely constant, you have no 15:39:35
treatment. You have no ability to estimate its 15:39:38
impact because it stays the same always. 15:39:40
Q. Well -- 15:39:43
A. Here -- here we have a period of sharp 15:39:43
decline, a period of flat, a couple periods of rise. 15:39:44

Those are the critical periods for deciding whether Adobe's total technical class average compensation had an impact on a title by title basis. 15:39:48 15:39:51 15:39:55

Q. Well, if you use the same time period you used before, 2004 to 2011, you'd have a decline, an increase, a decline, another decline, and an increase. Are you saying that time period is insufficient to draw a correlation relationship? 15:39:59 15:40:01 15:40:05 15:40:05 15:40:10

A. I -- 15:40:18

MR. GLACKIN: Object to form. 15:40:18

THE WITNESS: I -- I didn't say it was insufficient. I said that the earlier years are going to help a lot in measuring correlation. And it's going to be much more difficult if you only have the data set as you described between 2005 through 2011. 15:40:18 15:40:19 15:40:21 15:40:24 15:40:26 15:40:29

BY MR. MITTELSTAEDT: 15:40:29

Q. When you say difficult, are you saying you could not do a correlation analysis for 2004 to 2011? 15:40:30 15:40:32 15:40:35

A. No. I don't mean the word "difficult." I meant it would be likely less informative, the regression correlation would be estimated with greater accuracy because the inherent test experiment in this setting would not be as rich 15:40:37 15:40:38 15:40:42 15:40:44 15:40:44

because that first huge decline in compensation is a great experiment to see which of the elements of the class, which titles within the technical class move in parallel with that. 15:40:51 15:40:54 15:40:56 15:41:00

Q. If you didn't include those extra years compared with your conduct regression, would you expect to find weaker results? 15:41:02 15:41:05 15:41:07

A. So I'm trying to remember the conduct regression. There was no attempt to exclude years, but it did include live variables -- a couple live variables, so -- 15:41:12 15:41:13 15:41:16 15:41:20

Q. No, I'm just talking about the time period of the data you use? 15:41:21 15:41:23

A. Well, you made a parallel between this data set and the data set that I used in the conduct regression. I'm telling you I used all the data in the conduct reduction starting in 2001. But because the regression has some start-up issues with regard to it, mainly you have live variables in there, the effect that the evidence concentrates, I guess, did you say, 2003-4, but there's no attempt to exclude anything in the conduct regression at all. 15:41:23 15:41:25 15:41:28 15:41:30 15:41:35 15:41:37 15:41:41 15:41:44 15:41:49

Q. All right. If you used just 2004 to 2011, would you expect to find less correlation? 15:41:52 15:41:55

A. I'd expect to see less accurate 15:41:59

So whatever is affecting the long-term impact in this collection of left-out variables is being absorbed by one of these variables on the left, one of the ones that are included. 15:45:53 15:45:55 15:46:00 15:46:02

Q. Okay. But I'm asking -- 15:46:05

A. The residual doesn't contribute to a long-term growth. 15:46:05 15:46:05

Q. What I'm asking is, what are those factors, whether they are absorbed someplace else or not? 15:46:08 15:46:12

MR. GLACKIN: Object to the form. 15:46:15

BY MR. MITTELSTAEDT: 15:46:15

Q. Give me examples of other external factors. 15:46:15

MR. GLACKIN: Object to the form. 15:46:19

THE WITNESS: Well, we talked about one before which is something like a global market for technical employees rather just the San Jose marketplace. 15:46:19 15:46:23 15:46:26 15:46:29

BY MR. MITTELSTAEDT: 15:46:30

Q. And that kind of factor would be common to many job titles, right? 15:46:30 15:46:34

MR. GLACKIN: Object to form. 15:46:36

THE WITNESS: It could be. Doesn't have to be. 15:46:41 15:46:45

BY MR. MITTELSTAEDT: 15:46:46

Q. But it's plausible that it would be common 15:46:46

to many job titles, not just to a specific job title, right? 15:46:51 15:46:54

MR. GLACKIN: Object to form. 15:46:55

THE WITNESS: I'd have to see what the variable was before I would -- 15:46:57 15:46:58

BY MR. MITTELSTAEDT: 15:47:02

Q. It's the variable you just mentioned. 15:47:02

A. Well, the -- some measure of the external forces, then I think you would probably want to look at the fraction of the workforce in each one of these categories. Is in California, in San Jose, and the rest of the U.S., or outside the country -- the U.S. are the kind of things you might want to consider, but remember the -- this exercise is very limited in -- in scope. It's really a way of saying that correlations are not substantially at risk by considering some of these other influences. 15:47:05 15:47:08 15:47:10 15:47:14 15:47:17 15:47:20 15:47:22 15:47:30 15:47:32 15:47:36

Q. To the extent there are external factors common to many job titles where they are also influencing average compensation, wouldn't that cause your sharing coefficient to be biased upward? 15:47:42 15:47:45 15:47:48 15:47:50 15:47:56

MR. GLACKIN: Object to the form. 15:47:58

THE WITNESS: I'd have to say that it could, so let's understand that the exercise I 15:48:08 15:48:12

carried out is premised on the idea that it would. 15:48:14 Namely, we could potentially knock down the 15:48:18 contemporaneous impact of compensation overall and 15:48:23 on a title by adding in some of these external 15:48:26 variables. The two that are in there, as you know, 15:48:29 is San Jose variable and the revenue. 15:48:29

If you add another variable in here, I 15:48:33 don't think it's so clear exactly whether it would 15:48:38 have an impact on the internal effects or -- or, 15:48:40 instead, completely the external effects. So I 15:48:42 think it's pretty hard to predict for sure. 15:48:44

BY MR. MITTELSTAEDT: 15:48:49

Q. Okay. Did you -- did you run a regression 15:48:49 that way? 15:48:50

A. No, I told you, I picked the two variables 15:48:50 that I thought would have the biggest impact and 15:48:54 most likely to matter at lot. And those two 15:48:57 variables are the ones that are in here. 15:49:00

Q. In your supplemental report, again, Figures 15:49:02 15 and 16, you -- it's Page 27. You took selected 15:49:07 Adobe titles with the full 11 years of data. And in 15:49:16 Figure 15 you took the five most correlated. And in 15:49:21 16 you took the five least correlated. Do you see 15:49:26 that? 15:49:30

A. I do see that. 15:49:30

one at the bottom is a little bit better because you 15:53:27
have the technical class sitting in the middle of 15:53:29
the -- all of the other -- all of the other 15:53:31
displays. But when it's on the bottom, like it is 15:53:33
in 15 -- Figure 15, it's not very illuminating. I 15:53:36
mean, it's sort of surprising it's such a high 15:53:38
correlation. These are the categories that have the 15:53:38
highest correlation, when this thing looks like it's 15:53:45
totally flat, but it's not flat. So this is the 15:53:48
most leading figure -- my misleading figure, Figure 15:53:49
15, with regard to the total technical class and 15:53:51
yours is misleading for the same reason. 15:53:59

MR. GLACKIN: Would you like a break soon 15:54:26
and we'll go off record? 15:54:29

THE WITNESS: That would be good. 15:54:29

MR. MITTELSTAEDT: Actually, let's take a 15:54:31
five-minute break. 15:54:32

THE VIDEOGRAPHER: We are off the record at 15:54:33
3:54 p.m. 15:54:37

(Recess taken.) 16:08:54

THE VIDEOGRAPHER: We are back on the 16:08:58
record at 4:09 p.m. 16:08:58

BY MR. MITTELSTAEDT: 16:09:01

Q. And you can put that aside, sir, that 16:09:05
exhibit aside. 16:09:07

MR. GLACKIN: You mean 94? 16:09:09
MR. MITTELSTAEDT: Yes. 16:09:13
BY MR. MITTELSTAEDT: 16:09:15
Q. Do you believe that these seven companies were affected by the -- what's referred to by the -- what's referred to as the tech bust in early 200- -- 2000? 16:09:15 16:09:18 16:09:21 16:09:23
A. Yes, I do. 16:09:24
Q. And would you expect that during that period, on average, compensation would go down across the board as a result of the tech bust? 16:09:26 16:09:29 16:09:33
A. I'm not so sure it would go down across the board, but these firms would be under external duress and they might feel compelled to lower salaries of some people more than others. I don't know. It doesn't have to be across the board. 16:09:37 16:09:39 16:09:42 16:09:45 16:09:47
Q. To the extent companies lowered average compensation during those years, okay, would you contribute that to sharing, what you call sharing? 16:09:49 16:09:52 16:09:54
A. Well, sharing would be everybody in the firm suffered a similar salary reduction. 16:09:58 16:10:00
In other words, at the time of structure would stay intact, whether there are salary increases or salary reductions. 16:10:07 16:10:09 16:10:14
Q. Okay. But the average compensation 16:10:15

reduction during those years were caused by external factors, right; namely, the tech bust? 16:10:17 16:10:22

A. That's true. 16:10:24

Q. Okay. You consider the tech bust to be external, right? 16:10:25 16:10:27

A. Yes. 16:10:27

Q. And you considered the existence of cold calls or the nonexistence of cold calls to be an external factor, right? 16:10:28 16:10:31 16:10:35

A. Yes. 16:10:37

Q. And with respect to the tech bust, you agree that that would result in lowering of average compensation, whether a company did what you call sharing or not? 16:10:39 16:10:44 16:10:54 16:10:57

MR. GLACKIN: Object -- 16:11:02

BY MR. MITTELSTAEDT: 16:11:03

Q. Right? 16:11:03

MR. GLACKIN: Object to form. 16:11:03

THE WITNESS: It could, but these firms have to decide how they handle the tech bust. 16:11:03 16:11:05

BY MR. MITTELSTAEDT: 16:11:09

Q. Does your recent work reflected in your supplemental report suggest that compensation across employees is correlated? 16:11:09 16:11:12 16:11:15

MR. GLACKIN: Object to the form. 16:11:20

THE WITNESS: Well, the report, as you know, deals with titles. I mean, it doesn't address the data at the individual level. 16:11:23 16:11:26 16:11:29

BY MR. MITTELSTAEDT: 16:11:32

Q. But does your work reflected in that report suggest that compensation across job titles is correlated? 16:11:32 16:11:35 16:11:42

A. That compensation across job titles is correlated? Well, yeah, to the extent that's embodied in the compensation overall. There has to be some degree of correlation between the titles in order for there to be a correlation between a title and a class overall. 16:11:43 16:11:48 16:11:50 16:11:54 16:11:56 16:11:58

Q. Can you tell how much correlation there is across job titles? 16:12:03 16:12:05

A. Can I tell? 16:12:09

Q. Yes, from -- from the work you've done? 16:12:10

A. From these results? 16:12:12

Q. Yeah. 16:12:14

A. No, you can't tell from these results. 16:12:14

Q. Do you recall when Dr. Murphy critiqued your regression for failing to account for the fact that compensation for employees within the same firm is correlated -- 16:12:16 16:12:17 16:12:21 16:12:22

A. I don't -- I don't recall that. 16:12:26

Q. -- in your conduct regression? 16:12:26
A. I don't recall that. I don't recall that critique. 16:12:28 16:12:29
Q. Okay. And you rejected clustering standard errors, do you recall that? 16:12:30 16:12:32
A. Well, I -- I think that I accepted the idea that there was a pathology that was symptomized by the kinds of correlated errors, but the appropriate treatment wasn't to whitewash that pathology by correcting the standard errors. The correct thing to do was to find a variable that was driving this commonality. 16:12:36 16:12:38 16:12:43 16:12:46 16:12:51 16:12:54 16:12:56
Q. And did you do that work? Did you look for variables that was driving the commonality? 16:12:56 16:12:59
A. Well, we did because their revenue was the one variable that Dr. Murphy had proposed as a reason for his need to cluster standard errors, and so we had a revenue variable already there. So there was an attempt to -- to identify variables that -- that changed over time that would create unusual commonality. 16:13:02 16:13:04 16:13:08 16:13:12 16:13:15 16:13:20 16:13:24
Q. Okay. Have you done any other work on that? 16:13:26 16:13:27
MR. GLACKIN: Object to the form. 16:13:30
THE WITNESS: Now, this -- this latest 16:13:34

report is very limited in scope. It's very focused on a particular problem. It didn't address the set of questions that you're asking about now. 16:13:35 16:13:40 16:13:42

BY MR. MITTELSTAEDT: 16:13:46

Q. Okay. So have you done any additional work on your conduct regression to account for the fact that compensation among employees within the same firm is correlated? 16:13:46 16:13:48 16:13:50 16:13:53

A. Everything I've done with regard to conduct regression is in the -- either the initial report or the reply report. 16:13:56 16:13:59 16:14:03

Q. So is the answer no, you haven't done anything after that? 16:14:04 16:14:06

A. After the reply report, I haven't done anything with regard to conduct regression. 16:14:07 16:14:09

Q. And is there anything in your supplemental report on that? 16:14:11 16:14:13

A. No, there's not. 16:14:14

Q. Okay. Is it your view that complete disaggregation is a problem because it would reduce the number to at most 11 annual observations for each defendant, and it's impossible to estimate a model of the scope of yours with so few time period experiments? 16:14:19 16:14:23 16:14:30 16:14:34 16:14:37 16:14:42

MR. GLACKIN: Object to the form. 16:14:44

THE WITNESS: What was the verb, "disaggregation" is impossible? 16:14:45 16:14:46

BY MR. MITTELSTAEDT: 16:14:49

Q. Yes. 16:14:49

A. I would say it's highly unwise. 16:14:49

Q. Possible, but highly unwise? 16:14:52

A. Well, by "possible," I'm not so sure the scope of the word "possible." But, obviously, you can estimate a model on a defendant-by-defendant basis. And -- but if you have too many variables in that model, you're going to get a flag from the regression saying you've got too many variables, but you can still try to do it. So in that sense it's possible, but it's unwise. 16:14:56 16:15:00 16:15:04 16:15:11 16:15:14 16:15:17 16:15:19 16:15:20

Q. How could you modify the regression to allow you to run it separately for each defendant? 16:15:22 16:15:25

MR. GLACKIN: Object to the form. 16:15:30

THE WITNESS: Are we talking about annual data here? 16:15:30 16:15:34

BY MR. MITTELSTAEDT: 16:15:37

Q. Yes. 16:15:37

A. Well, the -- you have at most 11 observations annually, so the regression that you're hypothesizing has to have a very limited number of variables in there, like four or five. You get six 16:15:38 16:15:40 16:15:46 16:15:49

interacting the employer with a single-conduct variable, excluding interactions between conduct and age and hiring rate; do you remember that? 16:18:02 16:18:05 16:18:08
    A. That sounds right. I -- 16:18:10
    Q. Exhibit 15 -- Figure 15 in your reply. 16:18:11
    A. I don't think I have it. 16:18:15
        MR. GLACKIN: I don't think he has the reply report. 16:18:23 16:18:23
        MR. MITTELSTAEDT: Let's mark this 96. 16:18:27
      (Exhibit 96 marked for identification.) 16:18:39
        THE WITNESS: So what page are we talking about? 16:18:39 16:18:41
BY MR. MITTELSTAEDT: 16:18:42
    Q. Figure 15. 16:18:42
    A. Figure 15 is not a regression. Is that what you have in mind? 16:18:49 16:18:51
    Q. If you go to Page -- Page 50, Figure 12. 16:18:56
    A. Yes. 16:19:06
    Q. Okay. So there you desegregated by defendant by interacting employer with single-conduct variable, excluding interactions between conduct age and hiring rate, right? 16:19:10 16:19:12 16:19:15 16:19:18
    A. That's correct. Although, you -- you didn't indicate that there were also constant indicators for the firms. So the desegregation goes 16:19:22 16:19:24 16:19:29

beyond just the conduct variable, but it also intersects. 16:19:35 16:19:37

Q. And do you believe that the way you did it there is the appropriate way to disaggregate? By that I mean, to determine the impact of conduct separately for each defendant? 16:19:37 16:19:38 16:19:44 16:19:47

A. Well, my job was not to formulate what would be the ultimate damage estimate, but rather to provide a framework and approach that can be carried out. And I do think that this -- this demonstrates what can be done, allowing some desegregation, but not complete desegregation. 16:19:51 16:19:53 16:19:56 16:19:59 16:20:02 16:20:06

Q. Isn't that what Dr. Murphy did -- 16:20:19

MR. GLACKIN: Object -- 16:20:21

BY MR. MITTELSTAEDT: 16:20:22

Q. -- in one of his regressions, what you just said? 16:20:22 16:20:24

MR. GLACKIN: Object to the form. 16:20:25

THE WITNESS: I -- I have the impression that he overwhelmed the data analysis with vast numbers of -- of defendant indicators. And the result is when you overwhelm it, you're going to get big standard errors and aberrant estimates. 16:20:28 16:20:28 16:20:36 16:20:41 16:20:46

BY MR. MITTELSTAEDT: 16:20:48

Q. Okay. But do you recall that Dr. Murphy 16:20:48

actually ran two regressions, and one of them you criticized, as you just described, but he also ran a separate regression which interacted employer with single-conduct variable, just like you did? 16:20:49 16:20:54 16:20:57 16:21:01

A. I -- I don't recall that. 16:21:04

Q. Do you recall any reason why you didn't offer a criticism of that second approach by Dr. Murphy in your reply brief -- in your reply declaration? 16:21:11 16:21:12 16:21:17 16:21:20

A. Do I -- do I recall a reason why I didn't? 16:21:21

Q. Right. 16:21:25

A. Presumably because I didn't have comments to make about it. 16:21:26 16:21:28

Q. Okay. Finally, for me, with respect to UCLA, are you citing your experiences at UCLA as a -- as support for any opinion you're offering here? 16:21:30 16:21:36 16:21:41 16:21:46

A. I was asked whether I was familiar with any kind of internal salary structure, and the answer is yes. I work for UCLA, I've served as the chairman of the accounting department. I'm fully aware of the civil service type system that the UC system uses to determine compensation. And as I read through the documents that describe the -- these firms, it all seems very familiar. I look at 16:21:47 16:21:51 16:21:52 16:21:56 16:21:56 16:22:01 16:22:05 16:22:08

Dr. Halleck's report, it all seems very familiar. 16:22:12
So I -- I -- I don't think I used that in anything 16:22:15
I've done, but I do have significant familiarity 16:22:18
with this kind of an internal structure for wage 16:22:22
setting. 16:22:25

Q. From your experience at UCLA, whenever UCLA 16:22:25
gave a raise to one professor, did it give a raise 16:22:30
to all professors? 16:22:33

A. I think that would be unlikely immediately, 16:22:35
but I think the notion of internal equity plays a 16:22:37
huge role in determining compensation. 16:22:42

Q. I'm not asking about internal equity. I'm 16:22:44
asking about when UCLA, during the time you've been 16:22:47
familiar with it, gives a raise to one professor, 16:22:50
does it necessarily give raises to all other 16:22:55
professors? 16:22:57

A. Well -- 16:22:58

MR. GLACKIN: Object to the form. 16:23:01

THE WITNESS: So what -- you have to tell 16:23:05
me what it is that precipitated the raise to one 16:23:05
professor. 16:23:05

BY MR. MITTELSTAEDT: 16:23:05

Q. Let's say, bringing in a highly paid 16:23:05
professor? 16:23:13

A. From outside? 16:23:14

Q. From outside. 16:23:14

A. Yeah, that would normally precipitate a sequence of reactions in which the disgruntled parties who were loyal to the school for many, many years, would feel that they are as good as the outside appointment. They want to make a case that they deserve a compensation increase as well. 16:23:16 16:23:17 16:23:17 16:23:22 16:23:24 16:23:25

Q. Okay. And -- 16:23:25

A. And then that's going to filter through the bureaucracy and the English professors and engineering are going to worry about that, too. 16:23:28 16:23:32 16:23:37

Q. Okay. I'm not asking if people worry about that or try to make a case. I'm asking you did -- when -- do you know Gary Hanson? 16:23:39 16:23:42 16:23:42

A. Yes, I know Gary Hanson. 16:23:44

Q. Okay. Was he hired at UCLA when you were department head? 16:23:45 16:23:48

A. Well, I mean, it's quite possible, but I don't recall exactly. It would have been approximately that time. 16:23:50 16:23:53 16:23:53

Q. Do you recall he was brought in at a higher salary than some existing professors? 16:23:53 16:23:57

A. I know -- well, he didn't come at the base level because he had been at Santa Barbara for many years. So you're asking whether he was slotted high 16:24:00 16:24:01 16:24:04

MR. MITTELSTAEDT: Why don't you. 16:35:12

THE VIDEOGRAPHER: Okay. This is the end of Disk No. 4 in the deposition of Dr. Edward Leamer. We are off the record at 4:35 p.m. 16:35:13 16:35:14 16:35:19

(Recess taken.) 16:38:07

THE VIDEOGRAPHER: This is the beginning of Disk No. 4 -- No. 5 in the deposition of Dr. Edward Leamer. We are on the record at 4:40 p.m. 16:40:16 16:40:19 16:40:21

(Exhibit 100 marked for identification.) 16:40:26

EXAMINATION 16:40:26

BY MR. NIELDS: 16:40:27

Q. Good afternoon, Dr. Leamer. My name is John Nields and I represent Pixar in this litigation. I'm going to ask you a few questions this afternoon. 16:40:27 16:40:32 16:40:35 16:40:37

First of all, I put in front of you a copy of Judge Co's order on class certification, and then I have also put in front of you an excerpt which has been marked Exhibit 100, which is taken from the top of Page 43 of Judge Co's order. Do you have those in front of you? 16:40:38 16:40:41 16:40:44 16:40:52 16:40:55 16:41:00

A. I do. 16:41:03

Q. If you can -- 16:41:04

MR. GLACKIN: Did you bring copies? I mean, I hate to be sitting here in the video -- 16:41:04 16:41:07

(Inaudible.) 16:41:09

MR. NIELDS: I'm going to read the excerpt from the top of Page 140 -- excuse me, 43 of her order, and then ask you a couple of questions about it. 16:41:12 16:41:14 16:41:17 16:41:19

BY MR. NIELDS: 16:41:20

Q. It reads as follows, "In summary, the court finds that Dr. Leamer's common factors analyses and compensation movement chart fail to provide adequate support for or confirmation of his theory that there was a rigid wage structure, such that it impacted some defendants' employees, would necessarily have resulted in an impact to all or nearly all employees." 16:41:20 16:41:24 16:41:28 16:41:31 16:41:36 16:41:40 16:41:43 16:41:43

First of all, do you understand the word "employees" to refer to individuals? 16:41:43 16:41:51

A. Yes, I do. 16:41:53

Q. And was -- were the correlation analyses that you have done in your supplemental report in part a -- an effort to de- -- respond to the question in Judge Co's order; namely, the question of whether there was a rigid wage structure, such that the impact to some defendants' employees would necessarily have resulted in an impact to all or nearly all employees? 16:41:56 16:41:59 16:42:04 16:42:10 16:42:14 16:42:18 16:42:21 16:42:25

A. Yes. 16:42:26
Q. Okay. In your supplemental order -- 16:42:28
supplemental report, I think you have in front of 16:42:31
you somewhere, the one dated May 10th, 2013? 16:42:35
A. I do. 16:42:39
Q. On Page 1, at the bottom of the page, at 16:42:42
Paragraph 4, you state, "I present correlations that 16:42:48
compare the movement over time of the average 16:42:52
compensation of each title with the average 16:42:55
compensation of the firms' technical class." Is 16:42:58
that a description of one of the correlation 16:43:02
analyses that you did, in order to respond to the 16:43:05
judge's issue? 16:43:09
A. Where are you reading at? What paragraph? 16:43:12
Q. Paragraph 4, Page 1, and I'll read it 16:43:14
again. "I present correlations that compare the 16:43:25
movement over time of the average compensation of 16:43:27
each title with the average compensation of the 16:43:30
firms' technical class." Do you see that? 16:43:33
A. I do. 16:43:36
Q. And was that -- does that describe one of 16:43:37
the correlation analyses that you did in order to 16:43:40
respond to the judge's order? 16:43:42
A. Yes, it does. 16:43:47
Q. I'm going to ask you a couple of questions 16:43:48

about averages. So here's the first one. Is it 16:43:49
true that an average job title compensation of, say, 16:43:55
$100,000 per employee can result from a variety of 16:44:03
different underlying salary levels? 16:44:07
    A. Yes, that's true. 16:44:09
    Q. And, for example, in a job title -- 16:44:12
hypothetically, in a job title made up of four 16:44:14
employees, all four could have salaries of exactly 16:44:16
$100,000? 16:44:21
    A. That's correct. 16:44:22
    Q. Or the four employees could have salaries 16:44:24
of $70,000 for one, $85,000 for another, $115,000 16:44:27
for another, and $130,000 for another? 16:44:35
    A. I believe, you've done your arithmetic 16:44:39
correctly. 16:44:41
      (Exhibit 101 marked for identification.) 16:44:44
BY MR. NIELDS: 16:44:44
    Q. Okay. Well, I -- I don't want you to have 16:44:44
to answer it on the fly. I've marked as Exhibit 101 16:44:47
a one-page document which has in written form the 16:44:52
question that I asked you just a moment ago. Do you 16:44:56
have that in front of you? 16:45:00
    A. I do. 16:45:02
    Q. And it shows two scenarios. One with 16:45:04
everybody at the exact same salary and another, 16:45:06

scenario two, with one at 70-, one at 85-, one at 115-, and one at 130-? 16:45:10 16:45:13

A. Yes. 16:45:16

Q. And am I correct that in each case the average salary is $100,000 for the job title? 16:45:18 16:45:20

A. I think that's correct. 16:45:29

Q. All right. Now, is it also true that an average change in salary in a job title of, say, $10,000 or 10 percent off the $100,000 example we have, per employee, can result from a variety of underlying salary changes? 16:45:41 16:45:43 16:45:50 16:45:55 16:45:59

A. Yes, it could. 16:46:01

Q. For example, in a job title made up of four employees, all four could receive salary increases of $10,000, correct? 16:46:03 16:46:05 16:46:09

A. That is correct. 16:46:11

Q. Or, alternatively, one could receive a pay cut of $10,000, one a pay cut of $30,000, one a pay increase of $30,000, and one a pay increase of $50,000? 16:46:12 16:46:17 16:46:22 16:46:27

A. That's correct. 16:46:28

(Exhibit 102 marked for identification.) 16:46:31

BY MR. NIELDS: 16:46:31

Q. And, again, just to be sure, I have a one-page document marked Exhibit 102 that has 16:46:31 16:46:36

that -- those two scenarios in writing. Do you have that in front of you? 16:46:41 16:46:48

A. I do. 16:46:50

Q. And so one scenario shows everyone getting a raise of $10,000 or an average of $10,000, correct? 16:46:50 16:46:53 16:46:58

A. That's correct. 16:46:59

Q. And the other shows one with a drop in salary of $10,000, one with an increase of $30,000 one with a decrease -- another with a decrease of $30,000, and one with an increase of $50,000, correct? 16:47:00 16:47:04 16:47:09 16:47:11 16:47:16

A. Correct. 16:47:16

Q. And both of those scenarios result in a job title average change of plus $10,000? 16:47:18 16:47:21

A. That's correct. 16:47:27

Q. Now, here's my question. In addressing the issue of whether there was a rigid wage structure, such that an impact to some of defendants' employees would have necessarily resulted in an impact of all or nearly all employees, does it matter which one of these scenarios is true? 16:47:29 16:47:32 16:47:39 16:47:40 16:47:45 16:47:49

A. Well, these scenarios refer to one particular point in time. So you want me to hypothesize that that's going to occur in all 11 16:48:07 16:48:10 16:48:12

years in the data set or -- 16:48:16

Q. I'm asking whether in addressing the issue 16:48:18 in Judge Co's order, whether there was a rigid wage 16:48:24 structure, such that an impact to some of 16:48:30 defendants' employees would necessarily have 16:48:32 resulted in an impact to all or nearly all 16:48:35 employees, does it matter how the average change is 16:48:38 distributed amongst the employees in the class? And 16:48:42 I'm giving you this as an example to think from, 16:48:45 okay? We have one example -- one scenario that 16:48:50 everybody who is in lock step, $10,000 up. Another 16:48:53 when the members of the job title move in opposite 16:48:58 directions in different amounts. 16:49:03

A. Well, I think that I need to just tell you 16:49:08 what I've done and discuss the extent to which this 16:49:10 issue is embedded or not embedded in what I've done. 16:49:13 So I believe -- 16:49:19

Q. I'd be happy to have you do that, but I 16:49:19 would like an answer to the question whether it 16:49:22 matters in answering the judge's question which of 16:49:24 these two scenarios is true in -- as to this class, 16:49:27 excuse me, this job title and, of course, other job 16:49:33 titles -- 16:49:35

A. Well -- 16:49:35

Q. -- over -- over time? 16:49:36

A. The answer it could matter, but it need not matter. 16:49:37 16:49:39
Q. Well, have you -- if it could matter, have you in your report investigated and analyzed whether in the various job titles you have something like scenario 1 or something like scenario 2 in Exhibit 102? 16:49:41 16:49:48 16:49:51 16:49:57 16:50:03
A. Well, I've done this correlation analysis year by year. And the goal has been to pick out the common component of -- in the average compensation, the common variability that applies on year-by-year basis, the correlation of the average. And I think, that that correlation of the average is going to carry over to the individuals, unless the individuals are really unusual. And you're maybe hypothesizing some unusual characteristic individuals in which they would be uncorrelated with the -- with the title in which they reside. But I really think that the wage setting process, this top-down process, is one that dictates a certain amount of coordination within the title in terms of total compensation. 16:50:09 16:50:12 16:50:17 16:50:19 16:50:24 16:50:27 16:50:29 16:50:31 16:50:37 16:50:40 16:50:45 16:50:48 16:50:50 16:50:53 16:51:02
Q. Well, the purpose of your work, wasn't it to look at the data in order to draw an inference about whether the data showed a top-down rigid wage 16:51:04 16:51:05 16:51:08

structure or not? And my question is: Have you investigated, in preparing your report, whether the -- most of the time it happened as in scenario 1 or most of the time did it happen as in scenario 2? 16:51:11 16:51:17 16:51:21 16:51:25 16:51:29

A. Well, what I -- 16:51:30

MR. GLACKIN: Object to the form. 16:51:33

THE WITNESS: What I found is that there is a somewhat rigid structure of compensation at the title level. It's that somewhat rigid structure that allows the anti-cold calling conspiracy effects to be distributed across the firm. I think that applies in both scenario and scenario 2. In scenario 1 and in scenario 2. The existence of this title grade structure is what allows the effects to spread. And that -- that is my opinion and I hold it very strongly. And I am quite confident that all or most employees would be under control of that somewhat rigid salary structure. 16:51:34 16:51:36 16:51:45 16:51:53 16:51:53 16:51:57 16:52:00 16:52:03 16:52:11 16:52:13 16:52:17 16:52:21

BY MR. NIELDS: 16:52:23

Q. Well, my question actually was, did you investigate in your preparing your report whether the averages that you used in your work were made up of distributions within the job title like we see in scenario 2 or whether they were distributed as we 16:52:23 16:52:25 16:52:30 16:52:39 16:52:44

see in scenario 1? 16:52:48

A. I did not, but I explained in my report why. It's just I wanted -- 16:52:50 16:52:53

Q. It's fine. It's fine. You didn't. 16:52:54

A. I wanted to use the title structure for doing the analysis because that's the structure by which the firm would spread the effect broadly. And, secondly, because the titles have adequate number of employees, so that the idiosyncratic employee-specific effect would be reduced, possibly eliminated, by the averaging within the title. Which would allow me, a statistician, to uncover the common affects that these titles have. So I think averaging is appropriate for carrying out that exercise. 16:52:57 16:53:01 16:53:03 16:53:05 16:53:08 16:53:11 16:53:17 16:53:17 16:53:24 16:53:27 16:53:29

Q. So your answer that -- I want to be sure about this. Your answer is that in doing your correlation analysis, you decided it did not matter whether the averages were made up of employees who all got the same or almost the same change in their salaries -- in their salaries or instead whether the employees who made up the job title had -- had salaries that changed in all directions in differing amounts? You think that did not matter to your work? 16:53:30 16:53:33 16:53:38 16:53:44 16:53:51 16:53:57 16:54:00 16:54:04 16:54:12 16:54:14

BY MR. NIELDS: 17:09:10
Q. Um -- um, if you just use an average of the change in salaries at the job title level, you will end up with a single number, correct? 17:09:10 17:09:16 17:09:20
MR. GLACKIN: Object to the form. 17:09:25
THE WITNESS: Single number for -- 17:09:27
BY MR. NIELDS: 17:09:28
Q. For a particular change from one year to the -- to the first year to the second? 17:09:28 17:09:31
A. Yes, as you've indicated in these scenarios, that's true. 17:09:33 17:09:34
Q. Okay. 17:09:35
A. The averaging is going to eliminate the idiosyncratic individual effect. I totally agree with that. 17:09:35 17:09:36 17:09:39
Q. Well, it will also make it so that you -- you can't tell whether all of the members of the class moved in a way that correlated -- all of the members of the job title moved in a way that correlated to the class or whether some of them went the same direction and others went the opposite direction? 17:09:41 17:09:44 17:09:46 17:09:49 17:09:53 17:09:56 17:09:58
A. But -- but you're sort of missing the basic point that I'm trying to establish, and that's that the internal salary structure didn't refer to 17:10:01 17:10:03 17:10:06

individuals, it referred to titles and grades. So the mechanism by which the firm is controlling compensation and the mechanism by which that compensation is transmitted across the firm is through the title structure. And, accordingly, I've taken a focus on the title structure to see if you can see commonalities among the titles.

Now, it's a separate issue as to whether there are individuals within those titles that have movements that could not be counted at all by the overall title effect. But my premise is that -- my guess is that's very unlikely to occur.

Q. But you've not looked at it?

A. No, because my job was to demonstrate that there is a somewhat rigid salary structure which allows the cold-calling agreements to spread broadly across the firms.

Q. Have you read or had read to you a case from the Northern District of Illinois named Reed against Advocate Health Care?

A. No, I have not.

Q. So let me ask you this question, I take it, it's -- it's the case that if all tech class employees at Pixar were impacted, then you would expect that the job title averages would correlate

with the technical class average at Pixar? 17:11:36

MR. GLACKIN: Object to form. 17:11:44

THE WITNESS: Yes, except the way I've done it is to remove the title contribution to that overall class. 17:11:46 17:11:48 17:11:50

BY MR. NIELDS: 17:11:52

Q. Understood. But using your methodology, if -- if all of the tech class employees were impacted, you would expect that the job titles would correlate with the overall tech class average? 17:11:52 17:11:55 17:11:57 17:12:02

A. I'm not sure that I completely agree with that sentence, because I -- what I want to say is that the title structure is what allows the effect to spread broadly. But in the absence of title structure, is it a possibility that it could be spread broadly? I'm not sure. 17:12:08 17:12:10 17:12:17 17:12:20 17:12:25 17:12:26

Q. All right. Let me -- let me make my question clear. I thought it was clear. If all of the employees in the technical class at Pixar had been impacted by the alleged conduct, with me so far? 17:12:31 17:12:34 17:12:38 17:12:42 17:12:49

A. Yes. 17:12:50

Q. Then when you ran your correlations, you would expect to find that each job title would, on average, correlate to the tech class overall on 17:12:50 17:12:53 17:13:03

average, yes? 17:13:08
    A. I tried to answer that. Maybe I didn't -- 17:13:12
maybe I didn't answer adequately, but your 17:13:15
hypothetical is that everybody was affected. 17:13:17
    Q. Yes. 17:13:19
    A. And the question is, what was going on 17:13:20
inside the firm that allowed everybody to be 17:13:22
affected? One possibility is this rigid or 17:13:25
semi-rigid salary structure. 17:13:28
    Q. Well, can you -- 17:13:31
    A. But I'm not excluding that there are other 17:13:31
reasons why everybody at Pixar would have been 17:13:33
affected by this anti-cold calling. 17:13:36
    Q. I wasn't asking you anything about the 17:13:38
reason. I was asking if -- if everyone was 17:13:40
impacted, everyone, all the people in all the job 17:13:42
titles, all of them -- 17:13:47
        MR. GLACKIN: You mean across all firms? 17:13:48
        MR. NIELDS: No, I'm just doing Pixar. 17:13:51
        MR. GLACKIN: Okay. 17:13:53
BY MR. NIELDS: 17:13:53
    Q. All of them were impacted. Wouldn't -- 17:13:53
isn't it true that you would expect the job titles 17:13:55
would correlate to the tech class in your 17:13:58
correlation analysis? 17:14:06

A. Well, I -- I would prefer to say something differently, which is the evidence of that correlation is symptomatic of a salary structure that would allow the effects to spread broadly. The absence of correlation would mean that that would cast out on that structure.

Q. Can you imagine a situation in which all of the employees were impacted and it didn't show correlation?

A. Well, we talk about cultural wage suppression would come from a firm that is intent on holding onto its employees. And they can do that from high above without having a salary structure in place, hypothetically.

Q. We're not communicating. And I'm going to move on because I'm going to run out of time otherwise, if I haven't already.

How much more time do we have?

THE VIDEOGRAPHER: Yeah, I'm -- 30 minutes.

MR. NIELDS: 30 minutes?

THE VIDEOGRAPHER: Until 7 hours.

MR. NIELDS: So we're 30 minutes short of 7 hours?

MR. MITTELSTAEDT: But don't feel limited to 35 -- to 7 hours. We weren't last time and we

shouldn't be this time, in part because of the way the witness has been answering the questions. 17:15:11 17:15:14

MR. GLACKIN: Well, from my perspective, yes, you should feel limited by 7 hours. So, Mr. Mittelstaedt and I are in disagreement about that. 17:15:16 17:15:18 17:15:18 17:15:18

MR. HINMAN: Well, defendant -- I mean, the fact of the matter is that John has a few more questions, and then I have some questions I'd like to ask. So, are you willing to agree now that we can go until the time Dr. Leamer has to leave to catch his plane? 17:15:26 17:15:27 17:15:30 17:15:32 17:15:35 17:15:41

MR. GLACKIN: I'll agree that as a courtesy -- I'm not going to, like, stand him up at 7 minutes and expect him to walk out here. So if you're in the middle of a line of questioning, and you say, "Well, I just need like 5 more minutes, 10 more minutes, then I'll be done," that's fine. I'm not going to say -- I'm not going to like back out what's the latest possible time he can leave here by rocket ship and get on an airplane. 17:15:44 17:15:44 17:15:49 17:15:49 17:15:50 17:15:50 17:15:55 17:15:57 17:16:00

MR. HINMAN: Okay. Let's -- 17:16:03

MR. HARVEY: That's considerable between those two extremes. We should play it by ear. (Inaudible.) (Cross-talking.) 17:16:07 17:16:07 17:16:10

A. Yes.
Q. Now, you use the variable in there -- we talked about it today -- for San Jose Software Employment, correct?
A. That's correct.
Q. You mentioned today also in your testimony, I think, some other possible measures of the demands for software engineers. Do you recall that testimony generally?
A. Yes.
Q. Okay. And do you know what percentage of the class is software engineers?
A. Well, I'm --
Q. "Yes" or "no," do you know?
A. It's -- it's -- it's -- I don't know the -- off the top of my head.
Q. Okay. Is that percentage relevant to the appropriateness of the variable that you used?
A. Well, yes and no. The question is whether the -- what's the best variable that represents the -- the intensity of the tech job market. And I -- and I speculate that the software engineers are symptomatic of an intense job market coming off the lows in the Santa Clara County, they have had a huge decline in these tech jobs, and there was

substantial increases after 2004 and -5. 17:25:00
Q. Do you know what percentage of the technical class is outside Silicon Valley? 17:25:04 17:25:05
A. Off the top of my head I don't know, but it's a substantial amount. 17:25:09 17:25:11
Q. Is that question relevant to the appropriateness of your San Jose variable? 17:25:12 17:25:13
A. It is. 17:25:17
Q. What business is Intel in? 17:25:18
A. Intel is a chip maker and manufacturer. -- 17:25:20
Q. Right. 17:25:21
A. -- in chip design. 17:25:22
Q. Right. It doesn't make software, does it? 17:25:23
A. So I'm sure -- 17:25:26
Q. Does it? 17:25:27
A. -- they have software engineers who are involved in the design of those chips. 17:25:27 17:25:28
Q. All right. They have a whole bunch of hardware and semiconductor engineers, don't they? 17:25:31 17:25:32
A. That's true. 17:25:36
Q. Do you know what percentage of the total class is involved in designing and building semiconductors? 17:25:36 17:25:37 17:25:40
A. I do not know that. 17:25:44
Q. Is that relevant to your choice of 17:25:45

variable? 17:25:46
    A. Well, these are all speaking to the same 17:25:48
point, which I admit, which is that -- 17:25:51
    Q. I'd like to know first, "yes" or "no," is 17:25:53
that relevant to your choice of variable? 17:25:56
    A. All of these possibilities are relevant, 17:25:58
but possibilities don't mean actual hours. 17:26:00
    Q. Okay. Hypothetically -- now, as an expert, 17:26:03
you're familiar with the concept of hypothetical 17:26:05
questions. I get to ask those of you. You're okay 17:26:08
with that? 17:26:12
    A. Well, I don't want to be dragged into 17:26:12
hypotheticals that are inconsistent with -- that are 17:26:15
not on target with what I've done, but go ahead. 17:26:15
        MR. GLACKIN: Object to form. 17:26:21
BY MR. HINMAN: 17:26:23
    Q. All right. So let me ask you, 17:26:23
hypothetically, is it possible that there's a 17:26:26
variable out there to account for the demands for 17:26:27
--of the nationwide demand for semiconductor 17:26:33
engineers that might be appropriate or perhaps even 17:26:36
better in your model? 17:26:40
    A. That's possible. 17:26:41
    Q. So let's assume, hypothetically, that there 17:26:43
is such a variable. And let's assume that the -- 17:26:45

not have -- might have legs and these firms would have felt a greater pressure to maintain competitive wages. 17:29:55 17:29:59 17:30:03

BY MR. HINMAN: 17:30:04

Q. And that -- but the first step in how that would have manifested is that without the agreements there would have been more cold calls. In your opinion, that would have put additional pressure on wages, right? 17:30:04 17:30:05 17:30:08 17:30:11 17:30:13

A. That's not what I said. I said that in addition to having a conspiracy that suppressed cold calling, the very fact that it was a conspiracy to lower wages could create a culture of wage suppression that would extend beyond the narrow confines of absent cold calls. 17:30:14 17:30:17 17:30:23 17:30:26 17:30:30 17:30:32

Q. Are there other aspects that go into a culture of wage suppression you're referring to? 17:30:36 17:30:40

MR. GLACKIN: Object to the form. 17:30:43

BY MR. HINMAN: 17:30:44

Q. What else is that about? 17:30:44

MR. GLACKIN: Object to the form. 17:30:48

THE WITNESS: Well, that's -- that's a management that fills their desire and intention to suppress wages. 17:30:49 17:30:49 17:30:49

BY MR. HINMAN: 17:30:55

Q. Is there anything unlawful about having a desire on the part of management to suppress wages? 17:30:55 17:30:58 17:31:01
A. No, I don't suppose there is. 17:31:02
Q. Okay. So, then, would that not suggest that the so-called sharing variables in your regression are picking up these lawful effects of the culture of wage suppression? 17:31:05 17:31:05 17:31:08 17:31:12
A. I -- I don't think of the sharing effects as having much to do with that sentence that you talk about. 17:31:16 17:31:17 17:31:20
Q. Okay. Well, let me try again. 17:31:20
A. Speaking about the -- 17:31:23
Q. Let me -- let me -- 17:31:24
A. -- somewhat rigid wage structure. 17:31:25
Q. Okay. Fair enough. Let me try it again. Wouldn't it be true that the variable of average compensation that you used in your model, would be affected by the lawful aspects of the culture of wage suppression? 17:31:25 17:31:26 17:31:29 17:31:32 17:31:37
A. It could. 17:31:37
MR. GLACKIN: Object to the form. 17:31:39
BY MR. HINMAN: 17:31:40
Q. Now, you used, I think, earlier the analogy of rain in the absence of the cold-calling 17:31:40 17:31:47

agreements, right? You said -- 17:31:49
A. Right. 17:31:49
Q. -- this information would rain down, do you remember that? 17:31:49 17:31:52
A. I do remember that term. 17:31:53
Q. But there was lots of rain already falling each and every day, wasn't there? 17:31:54 17:31:56
A. It was a different kind of rain. 17:31:57
Q. How is it different? 17:31:59
MR. GLACKIN: Object to the form. 17:32:03
THE WITNESS: It wasn't between the -- these firms that put in place this anti-cold calling conspiracy -- 17:32:03 17:32:04 17:32:06
BY MR. HINMAN: 17:32:06
Q. No, it was between -- right, I understand that. It was between lots and lots of -- 17:32:07 17:32:09
MR. GLACKIN: Wait, wait, wait. You asked him how it was different, he's telling you how. 17:32:10 17:32:11
MR. HINMAN: Well, he just told me. I get it, but -- 17:32:14 17:32:14
MR. GLACKIN: He wasn't finished answering. 17:32:16 17:32:18
THE WITNESS: And the fact that these firms chose these specific arrangements seems to me symptomatic of the fact that these were special 17:32:19 17:32:23 17:32:23

A. I didn't say single most important. Important enough so that these decisions would go all the way up to the CEO office. Important enough so that the CEOs would risk antitrust litigation. And I take that to be symptomatic effect that these conduits of information that they were blocking were having a big impact on the firms and they were not going to tolerate it. 17:34:17 17:34:20 17:34:21 17:34:23 17:34:27 17:34:30 17:34:33 17:34:36

Q. Are you saying that Google cold calling into Adobe was not a significant event to Adobe's senior management? 17:34:38 17:34:42 17:34:46

A. No. 17:34:46

Q. Is that your testimony? 17:34:47

A. I'm -- no. I'm saying -- 17:34:48

Q. Okay. What about -- 17:34:49

A. -- that the agreement not to cold call between Google and Apple is a symptom of the importance of that conduit of information. 17:34:50 17:34:51 17:34:54

Q. And -- and it's also true isn't it, specifically, that every one of the other defendants could cold call into Adobe other than Apple, right? 17:34:56 17:34:59 17:35:04 17:35:08

A. That's correct. 17:35:08

Q. And every one of the other defendants could cold call into Intel other than Google, right? 17:35:09 17:35:10

A. In Pixar or no? 17:35:16

Q. No. 17:35:17

A. Okay. 17:35:19

Q. And so yes, you agree with that? 17:35:19

A. I agree. 17:35:21

Q. And every single other employer in the world, including all of the other defendants, other than Pixar, could cold call into Lucasfilm, right? 17:35:25 17:35:26 17:35:29

MR. GLACKIN: Object to the form. 17:35:34

THE WITNESS: I stipulated that all these other channels are open. 17:35:35 17:35:36

BY MR. HINMAN: 17:35:39

Q. Okay. You testified before -- and I'll read it to you again, if you want -- that cold calling was occurring and the process of price discovery and internal equity was going on each and every day by virtue of every call from each one of these other companies. And all of that plays a role in the process -- process of price discovery, does that sound familiar? 17:35:39 17:35:39 17:35:42 17:35:45 17:35:49 17:35:52 17:35:54 17:35:58

A. That sounds familiar and I stand by that. That's correct. But that does not say -- there's nothing in that statement that says these obstructions to these conduits were unimportant. The fact that the obstruction occurred is evidence 17:35:59 17:36:01 17:36:01 17:36:06 17:36:08

that these were extremely important. 17:36:11

MR. MITTELSTAEDT: In each respect -- I 17:36:13 move to strike that as nonresponsive. I've got 17:36:13 three questions that I have left and I'm going to 17:36:15 stay here and insist that the witness answer them 17:36:18 because he's taking up our time. I'm not going to 17:36:18 take up any more time with that. So I -- 17:36:18

MR. GLACKIN: If we can just calm 17:36:18 everything down and, you know, proceed with a -- 17:36:18 some lowered voices in a more measured way, I think 17:36:18 that everyone will be happier. I'm detecting a lot 17:36:40 of emotion on the other side of the table. 17:36:43

MR. HINMAN: Okay. Well, I don't mean to 17:36:54 convey that, then. 17:36:58

So, I lost my place. Give me a second. 17:36:58

MR. GLACKIN: You just read the part that 17:36:58 he agreed what he said before in this deposition. 17:36:59

BY MR. HINMAN: 17:37:01

Q. Yeah, yeah. And then also with respect to 17:37:01 the agreements themselves, you also understand that 17:37:04 those companies could all recruit from each other in 17:37:08 every other way except for cold calling; is that -- 17:37:13

A. I understand that. 17:37:15

Q. So let me go back to my question, then. 17:37:19 There was a lot of rain, to use your analogy, that 17:37:21

BY MR. HINMAN: 17:39:28

Q. Have you seen any evidence in the documentary record of the manager to manager propagation that you testified to earlier? Do you want me to rephrase that? 17:39:28 17:39:30 17:39:34 17:39:39

A. No. 17:39:43

Q. Okay. 17:39:44

A. I'm trying to think if there is that. 17:39:46

Q. Okay. 17:39:48

A. It just seems to me there are so many of the HR documents and so much testifying from the HR personnel that the -- that the manager to manager is not necessarily the main conduit by which this thing is -- has an impact on compensation, although it could be a conduit. 17:39:51 17:39:53 17:39:58 17:40:02 17:40:06 17:40:09

Q. Okay. Well, okay. So let's unpack that. You don't cite any evidence of manager to manager propagation in your report, do you? 17:40:11 17:40:15 17:40:18

A. No, I do not. 17:40:20

Q. And now you say it could be significant, but you don't know whether it is or maybe something else is more significant. What's the most significant -- 17:40:23 17:40:24 17:40:27 17:40:30

A. What's the most significant? 17:40:31

Q. -- mechanism for the propagation of the 17:40:34

compensation effects of all or nearly all employees that you opined occurred? 17:40:37 17:40:41

A. Well, I'm not so sure I understood what you mean by "most significant," because I've not been asked to go through the alternative channels to indicate which one was significant and which one was most significant. 17:40:44 17:40:47 17:40:49 17:40:52 17:40:56

Q. Okay. 17:40:56

A. But I -- I would say that somewhat rigid salary structure is an important feature of all these firms that allows them to transmit the impact of the anti-cold calling conspiracy broadly. 17:40:56 17:40:59 17:41:06 17:41:10

Q. And would you agree that the rain that was falling during the class period -- let me put it this way. Would you agree that there's no evidence that the rain that was falling during the class period led to any firmwide compensation effect, any textual evidence? 17:41:16 17:41:19 17:41:29 17:41:33 17:41:36 17:41:43

A. Any textual evidence? 17:41:46

Q. Textual evidence. 17:41:48

A. About the impact of the anti-cold calling conspiracies? 17:41:49 17:41:52

Q. No, about the information flow and price discovery that was happening each and every day by virtue of all the other cold calls and hires and 17:41:53 17:41:55 17:41:59

everything else that was going on? 17:42:03
A. You're asking me whether there was textual evidence about this other rain, the other information about outside jobs and opportunities? 17:42:05 17:42:06 17:42:09
Q. Propagating across the firms -- 17:42:14
A. Propagating -- 17:42:17
Q. -- in any fashion, yeah. 17:42:17
A. Well, like I said, my interpretation of the HR documents is that they have -- they are very concerned about internal equity issues, and that's the sense of this -- this thing is going to propagate across the firms. 17:42:18 17:42:20 17:42:23 17:42:27 17:42:30
Q. Did you ever see any evidence it did? 17:42:32
A. Well, I've seen the HR statements saying that internal equity is very important, so and so got a salary increase, what are we going to do about this. And as far as the specifics of individuals that would or would not have been receiving higher wages, I don't know that. 17:42:35 17:42:37 17:42:40 17:42:44 17:42:46 17:42:51
Q. Now, you've talked about -- quite a bit today, about corrective actions, so I want to ask you a few questions about that. Big bang is not an example of corrective action; isn't that right? 17:42:54 17:42:57 17:42:59 17:43:03
A. By "corrective action," you mean a second variable in my regression analysis? 17:43:06 17:43:09

Q. And not the first. Correct. 17:43:11

A. That's correct. 17:43:12

Q. Now, I'd like you to tell me as precisely as you can -- well, let me take one step back. You've looked at both contemporaneous effects and lag effects of corrective action. You've looked at both of those things at the job title level? 17:43:14 17:43:18 17:43:23 17:43:28 17:43:31

A. Correct. 17:43:34

Q. Okay. So I'd like you to tell me as precisely as you can, how any contemporaneous or corrective effects at the job title level was in the real world or would have been in the but-for world transmitted to individual employees? 17:43:35 17:43:37 17:43:41 17:43:45 17:43:48

A. Well, the -- the evidence I'm presenting is with regard to the existence of a somewhat rigid salary system. And then the -- that's a system which allows for the transmission. The data analysis is specific with regard to that because you have somebody's trans- -- in effect, transmission coefficients with the contemporaneous effects and the lag effect. 17:43:54 17:43:56 17:43:58 17:44:02 17:44:05 17:44:07 17:44:13 17:44:15

Q. Well, I understand there is a structure that allows for that to happen, and you refer to your data. But I want to know how it either did or would have actually happened? What is it about the 17:44:16 17:44:18 17:44:20 17:44:24

structure, for example, at each of those seven companies that would have caused that to happen, as precisely as you can? 17:44:28 17:44:31 17:44:35

A. Well, I can describe what the models suggests. The model suggests that there's a commonality either as a dropdown compensation system that creates a substantial contemporaneous commonality in increases of compensation over -- for the firm overall and for most of these files. In other words, there's a substantial correlation whether it's simple correlation or a partial correlation controlling those variables is there. So that's the sense in which there is evidence of wage sharing. 17:44:38 17:44:39 17:44:39 17:44:46 17:44:50 17:44:54 17:44:56 17:45:01 17:45:03 17:45:06 17:45:11

Q. Okay. Anything -- anything outside that data? 17:45:13 17:45:20

A. Well, beyond the data? 17:45:21

Q. Yeah. 17:45:22

A. Well, like I said, I've seen HR documents all of which seem to me to be suggestive that internal equity plays a big role. And these equations are basically about internal equity. Sharing and the commonalities. 17:45:22 17:45:24 17:45:26 17:45:30 17:45:30

MR. GLACKIN: Okay. We're at 7 hours. He has an 8:00 o'clock flight. I'll give you guys 10 17:45:32 17:45:33

more minutes, approximately till 6:00 o'clock. And the reason I'm doing this is because three people said they want to ask more questions, including Mr. Hinman who I think has more. So do you guys want to take a two minutes to get organized -- 17:45:33 17:45:39 17:45:39 17:45:44 17:45:45

MR. HINMAN: No -- 17:45:48

MR. GLACKIN: -- or -- 17:45:48

MR. HINMAN: -- but I appreciate that. Thank you. 17:45:48 17:45:49

MR. GLACKIN: That's all right. 17:45:50

MR. MITTELSTAEDT: I don't agree with that. 17:45:52

MR. GLACKIN: Okay. 17:45:52

MR. MITTELSTAEDT: And he doesn't need an hour to get to the airport. 17:45:52 17:45:52

MR. GLACKIN: Okay. 17:45:59

MR. MITTELSTAEDT: I really do have only three questions. 17:46:00 17:46:00

MR. GLACKIN: Okay. 17:46:01

MR. HINMAN: I'm going to try to wrap up. 17:46:01

BY MR. HINMAN: 17:46:07

Q. Now, let's go back to correlations and also the contemporaneous variables and the regression, because the contemporaneous variable regression, generally speaking, is taken from the correlations. Is that close enough to be accurate? 17:46:07 17:46:12 17:46:16 17:46:16 17:46:23

A. Well, it -- it reflects the same effect, but all the variables have been removed from that. So it's not a simple correlation. It's a partial correlation. 17:46:26 17:46:27 17:46:35 17:46:37

Q. Okay. Fair enough. Would you agree that there are a large number of internal common factors that can affect compensation within a firm? 17:46:37 17:46:38 17:46:42

A. Not sure I understand what you mean by "common factors." 17:46:48 17:46:52

Q. Are there -- in your first report, for example, you did a common factors regression, correct? 17:46:53 17:46:56 17:46:58

A. That's correct. 17:46:59

Q. And you put in a number of variables into that regression that were common across employees in which you used to estimate effects? 17:47:00 17:47:04 17:47:12

A. Yes. For example, age and education would have an impact on compensation. 17:47:17 17:47:19

Q. Sure. And job tenure, I think that was one that you used? 17:47:25 17:47:27

A. That's correct. 17:47:29

Q. If -- are you aware in one year Intel had a pay freeze during the -- after the class period? 17:47:30 17:47:33

A. I think I recall that, yes. 17:47:34

Q. And would that be considered a common 17:47:36

internal factor that would have some common effect across Intel's employees? 17:47:39 17:47:46

A. I don't have that singled out. I mean, I don't have an indicator that would pick that up. 17:47:48 17:47:50

Q. No, I understand. But that would be another example, right? 17:47:52 17:47:53

A. Well, that's rather like -- rather unlike the education, age, and tenure. It's a -- it's a -- I don't know if I would call it a common factor, but I definitely would agree that could have an impact on compensation at many title levels for that particular year. 17:48:00 17:48:02 17:48:07 17:48:10 17:48:12 17:48:20

Q. Now -- so given the fact that there are a large number of internal factors that could affect firmwide compensation, isn't it right in the correlation results, as well as your contemporaneous sharing variable could reflect the effect of one or more of those factors and have nothing at all to do with sharing, as you define it? 17:48:22 17:48:25 17:48:28 17:48:33 17:48:37 17:48:41 17:48:44

MR. GLACKIN: Object to the form. 17:48:47

THE WITNESS: Well, you're -- you're saying, I think, that if you add more variables to this equation, it's possible you're going to get different conclusions. And that's a feature of regression. The variables could be described as 17:48:48 17:48:49 17:48:53 17:48:55 17:48:57

something that was internal or could be described as something that is external. But you've got to recognize that there's a very limited data set. There's only so far you can push this thing. 17:49:01 17:49:05 17:49:07 17:49:09
BY MR. HINMAN: 17:49:13
Q. Okay. That's -- bearing that in mind, you -- it sounded like you would agree that the results that you got of your -- both your correlation and with respect to your contemporaneous sharing variable, may have nothing at all to do with actual sharing as you define it? 17:49:13 17:49:13 17:49:17 17:49:19 17:49:23 17:49:27
A. Well, I don't know -- I think that that's -- that's -- that's accurate, it may have. But understand the reason that I went beyond the simple correlation is to extract some probable reason why there is a correlation and find out whether there's partial correlation that remains after extracting those effects. So I think trying to carry out, in a sense, the exercise that you're recommending -- 17:49:36 17:49:36 17:49:37 17:49:40 17:49:44 17:49:48 17:49:51 17:49:52 17:49:55
Q. Right. 17:49:55
A. -- which is pull out from the correlation that which is not due to sharing. 17:49:55 17:49:57
Q. Right. But your contemporaneous variable that you used in your regression is -- remind me, 17:50:00 17:50:03

average firmwide compensation? 17:50:11

A. You're right. X the title that we're studying. 17:50:12 17:50:15

Q. X the title that we're studying. So all those other internal factors that we've identified could have an affect on that variable, right? 17:50:17 17:50:19 17:50:27

A. I say again, which is, if you add more variables, whether they are internal or external variables, the coefficients could change. 17:50:29 17:50:32 17:50:32

Q. So the answer to my question is "yes"? 17:50:35

A. Yes, but I've already said that. 17:50:37

Q. Okay. Regardless of whether, in fact, there was any sharing, right? 17:50:40 17:50:42

A. Regardless -- 17:50:43

MR. GLACKIN: Object to form. 17:50:45

BY MR. HINMAN: 17:50:49

Q. -- of whether there was, in fact, any -- in other words, you can get the same results in both correlations and your contemporaneous variable, whether or not there was, in fact, any sharing going on? 17:50:49 17:50:50 17:50:52 17:50:55 17:50:58

MR. GLACKIN: Object -- 17:50:58

BY MR. HINMAN: 17:50:59

Q. Isn't that right? 17:50:59

MR. GLACKIN: Object to the form. 17:50:59

THE WITNESS: Well, I prefer to explain it, 17:51:01
as I did a minute ago, which is if you add 17:51:02
additional variables in a regression that's having a 17:51:06
hard time absorbing what we've got, those variables 17:51:08
could change the contemporaneous effect. 17:51:12
BY MR. HINMAN: 17:51:15
Q. Didn't you have more variables in your 17:51:15
conduct regression -- (Cross-talking.) 17:51:17
A. I did. 17:51:18
Q. -- than you had in -- and didn't you have 17:51:18
fewer observations? 17:51:22
A. Which conduct regression are you talking 17:51:24
about? The one that we were just -- 17:51:26
Q. The damages -- 17:51:26
A. -- looking at that we did individual data 17:51:29
on -- 17:51:30
Q. The damages -- 17:51:30
A. individual -- 17:51:30
MR. GLACKIN: Just to help, you should 17:51:30
specify the original report or reply. 17:51:32
MR. HINMAN: I'll pass that by. 17:51:37
BY MR. HINMAN: 17:51:40
Q. Are you familiar with the term 17:51:40
"falsification"? 17:51:41
A. I guess so. But you would have to give me 17:51:42

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on _____________________, 2013, at_____________,________________.

____
EDWARD LEAMER

STATE OF CALIFORNIA) ss:
COUNTY OF MARIN)

I, ASHLEY SOEVYN, CSR No. 12019, do hereby certify:

That the foregoing deposition testimony was taken before me at the time and place therein set forth and at which time the witness was administered the oath;

That the testimony of the witness and all objections made by counsel at the time of the examination were recorded stenographically by me, and were thereafter transcribed under my direction and supervision, and that the foregoing pages contain a full, true and accurate record of all proceedings and testimony to the best of my skill and ability.

I further certify that I am neither counsel for any party to said action, nor am I related to any party to said action, nor am I in any way interested in the outcome thereof.

IN THE WITNESS WHEREOF, I have transcribed my name this 17th day of June, 2013.

ASHLEY SOEVYN, CSR 12019